

Appendix E.1

Oil and Gas Stipulations – Alternative A (No Action)

Summary List of Stipulations

Air Resources:

Refer to Lease notices in Appendix E.7.

Water Resources:

Management Action 1: NSO. Wetlands, Riparian Areas, Floodplains

Soil Resources:

Management Action 1: CSU. Sensitive Soils (Slopes)

Wildlife:

Management Action 2: NSO. Sharp-Tailed Grouse Leks
 Management Action 4: TLS. Sharp-Tailed Grouse Nesting Habitats
 Management Action 6: CSU. Sharp-Tailed Grouse and Prairie Chicken Nesting Area – Raptor Perches
 Management Action 7: CSU. Sharp-Tailed Grouse and Greater Prairie-Chicken - Underground Utility (Power and Transmission) Lines
 Management Action 8: TLS. Big Game Winter Range
 Management Action 10: NSO. Raptor Nest Sites Not Defined as Sensitive and Special Status
 Management Action 12: NSO. Bighorn Sheep Range

Special Status Species:

Management Action 1: NSO. Bald Eagle Nests
 Management Action 4: NSO. Peregrine Falcon Nests
 Management Action 6: NSO. Special Status Raptor Nests
 Management Action 9: NSO. Greater Sage-Grouse Leks
 Management Action 11: TLS. Greater Sage-Grouse Winter Range
 Management Action 13: TLS. Greater Sage-Grouse Nesting Habitat
 Management Action 15: CSU. Greater Sage-Grouse General Habitat (GHMAs - Underground Utility (Power and Transmission) Lines
 Management Action 20: NSO. Greater Sage-Grouse PHMAs
 Management Action 29: NSO. Piping Plover Habitat
 Management Action 31: NSO. Interior Least Tern Habitat

Fisheries and Aquatics:

Management Action 4: NSO. Reservoirs with Fisheries

Visual Resources:

Management Action 2: CSU. VRM Facilities Camouflage
 Management Action 3: NSO. VRM Special Recreation Management Areas

Recreation:

Management Action 12: NSO. Recreation

Lands and Realty:

Management Action 2: ROW Authorizations for Visual Resources and Wildlife

Cultural Resources:

Management Common to All: Cultural Resources and Tribal Consultation
Management Common to All: Cultural Resource Survey Requirements

Paleontological Resources:

Management Common to All: NSO in designated paleontological sites/localities

Waivers, Exceptions and Modification (WEMs)

Waivers, exceptions and modifications (WEMs) provide an effective means of applying “Adaptive Management” techniques to oil and gas leases and associated permitting activities to meet changing circumstances. The criteria for approval of waivers, exceptions, and modifications should be supported by National Environmental Policy Act (NEPA) analysis, either through the land use planning process or site-specific environmental review. An exception, waiver, or modification must be based on one of two criteria. According to 43 CFR 3101.1-4, “A stipulation included in an oil and gas lease shall be subject to modification or waiver only if the authorized officer determines that the factors leading to its inclusion in the lease have changed sufficiently to make the protection provided by the stipulation no longer justified or if the proposed operations would not cause unacceptable impacts.”

Definitions from BLM IM 2008-032

A Lease Stipulation is a condition of lease issuance that provides a level of protection for other resource values or land uses by restricting lease operations during certain times or locations or to avoid unacceptable impacts, to an extent greater than standard lease terms or regulations. A stipulation is an enforceable term of the lease contract, supersedes any inconsistent provisions of the standard lease form, and is attached to and made a part of the lease. Lease stipulations further implement the Bureau of Land Management’s (BLM) regulatory authority to protect resources or resource values. Lease stipulations are developed through the land use planning process.

A Condition of Approval (COA) means a site-specific and enforceable requirement included in an approved Application for Permit to Drill (APD) or Sundry Notice that may limit or amend the specific actions proposed by the operator. Conditions of Approval mitigate impacts to resource values or other uses of public lands. Refer to Appendix E-9 for more details.

Note: While the term lease “stipulation” is used frequently in this document, it should be noted that the concepts contained within this policy can also be applied with some adaptation to Terms and Conditions and to Conditions of Approval.

A waiver is a permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

An exception is a one-time exemption for a particular site within the leasehold; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the leasehold. An exception is a limited type of waiver.

A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold to which the restrictive criteria are applied.

Oil and Gas Stipulations with Waivers, Exceptions and Modifications (WEMs) Alternative A (No Action)

Air Resources:

Refer to Lease Notices in Appendix E.7.

Water Resources: Management Action 1

Resource:	Water and riparian vegetation
Stipulation:	No Surface Occupancy stipulation. Riparian areas, 100 year floodplains of major rivers, and water bodies and streams would be managed as a No Surface Occupancy and Use for oil and gas leasing.
Objective:	To protect the unique biological and hydrological features associated with wetlands, riparian areas, floodplains, streams, lakes, and reservoirs.
Exception:	The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality.
Modification:	The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain wetlands or riparian areas.
Waiver:	This stipulation may be waived by the authorized officer if it is determined that the entire leasehold does not include wetlands, riparian areas, floodplains, streams, lakes, or reservoirs.

Soil Resources: Management Action 1

Resource:	Sensitive Soils (Slopes)
Stipulation:	Controlled Surface Use: Slopes over 30 percent would be managed as a Controlled Surface Use stipulation for oil and gas activities. Prior to surface disturbance on slopes over 30 percent, an engineering and reclamation plan must be approved by the Authorized Officer (AO). The plan must demonstrate how the following will be accomplished: <ol style="list-style-type: none"> 1) site productivity restored; 2) surface runoff adequately controlled; 3) off-site areas protected from accelerated erosion, such as rilling, gullyng, piping, and mass wasting; 4) water quality and quantity in conformance with state and federal water quality laws; 5) surface-disturbing activities prohibited during extended wet periods; and 6) construction not allowed when soils are frozen.
Objective:	To prevent excessive soil erosion on steep slopes and to avoid disturbing slopes subject to slope instability or with potential reclamation problems.
Exception:	The AO may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not contribute to unacceptable degradation of the soil resource or down slope resource conditions.
Modification:	The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain slopes 30 percent or greater.
Waiver:	This stipulation can be waived by the AO if it is determined that no part of the lease area contains slopes 30 percent or greater.

Wildlife: Management Action 2

Resource:	Sharp-Tailed Grouse Leks
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of grouse leks.
Objective:	Protection of sharp-tailed grouse nesting and brood rearing habitat.
Exception:	An exception to this stipulation can be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area no longer are within ¼ mile of sharp-tailed grouse leks.
Waiver:	This stipulation can be waived if the authorized officer determines that the entire leasehold no longer is within ¼ mile of sharp-tailed grouse leks.

Wildlife: Management Action 4

Resource:	Sharp-Tailed Grouse Nesting Habitats
Stipulation:	Timing Restriction: Surface use would be prohibited from March 1 to June 15 in grouse nesting habitat within 2 miles of a lek. This stipulation does not apply to the operation and maintenance of production facilities.
Objective:	Limit disturbance to sharp-tailed grouse during critical periods.
Exception:	An exception to this stipulation can be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area no longer contain sharp-tailed nesting habitat within 2 miles of a lek. The dates for the timing restriction can be modified if new information indicates that the March 1 to June 15 dates are not valid for the leasehold.
Waiver:	This stipulation can be waived if the authorized officer determines that the entire leasehold no longer contains sharp-tailed grouse nesting habitat within 2 miles of a lek.

Wildlife: Management Action 6

Resource:	Sharp-tailed grouse and prairie chicken nesting area Raptor Perches
Stipulation:	Sharp-tailed grouse or greater prairie chickens requirements would be considered when designing or siting structures that are over 10 feet in height that create raptor perches within the 2 mile buffer of sharp-tailed grouse and greater prairie chicken nesting areas.
Objective:	Reduce raptor predation of sharp-tailed grouse and greater prairie chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	None.

Wildlife: Management Action 7

Resource:	Sharp-Tailed Grouse and Greater Prairie Chickens - Underground Utility (Power and Transmission) Lines
Stipulation:	Sharp-tailed grouse or greater prairie chickens requirements would be considered when designing or siting power lines within a 2 mile buffer of nesting areas.
Objective:	Reduce hazards to grouse and greater prairie chickens from power lines and reduce raptor predation of sharp-tailed grouse and greater prairie chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	None.

Wildlife: Management Action 8

Resource:	Big Game Winter Range
Stipulation:	Timing Limitation: Surface-disturbing and disruptive activities in big game winter range would be restricted from oil and gas development and production from December 1 to March 31. This stipulation would not apply to the operation and maintenance of production facilities.
Objective:	Maintain big game habit and avoid or minimize habitat loss and disturbance.
Exception:	An exception to this stipulation can be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area no longer contain crucial winter range for wildlife. The dates for the timing restriction can be modified if new wildlife use information indicates that the December 1 to March 31 dates are not valid for the leasehold.
Waiver:	This stipulation can be waived if the authorized officer determines that the entire leasehold no longer contains crucial winter range for wildlife.

Wildlife: Management Action 10

Resource:	Raptor nest sites not defined as sensitive and special status that were active within the last 7 years
Stipulation:	Raptor nest sites not defined as sensitive and special status requirements for oil and gas operations would be considered when an oil and gas drilling, production, or plugging and abandonment plan is submitted to the BLM.
Objective:	Limit nesting disturbance to raptors that are not identified as sensitive raptor species.
Exception:	None.
Modification:	None.
Waiver:	None.

Wildlife: Management Action 12

Resource:	Bighorn Sheep Range
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Oil and Gas Stipulations – Alternative A

Stipulation:	Bighorn sheep requirements for oil and gas operations would be considered when and oil and gas drilling, production, or plugging and abandonment plan is submitted to the BLM.
Objective:	Limit disturbance to bighorn sheep.
Exception:	None.
Modification:	None.
Waiver:	None.

Special Status Species: Management Action 1

Resource:	Bald Eagle Nests
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of bald eagle nest sites active within the past 5 years and within bald eagle nesting habitat in riparian areas.
Objective:	Limit disturbance to bald eagle nesting habitat.
Exception:	An exception can be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect bald eagles or their habitat. If the authorized officer determines that the action can affect bald eagles or their habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer, in consultation with the USFWS, determines that portions of the area can be occupied without adversely affecting bald eagle nest sites or nesting habitat.
Waiver:	This stipulation can be waived if the authorized officer, in consultation with the USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat or the bald eagles is declared recovered and no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 4

Resource:	Peregrine Falcon Nests
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within 1 mile of peregrine falcon nest sites.
Objective:	Limit disturbance to peregrine falcon nesting habitat.
Exception:	An exception may be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the authorized officer determines that the action may or will have an adverse effect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by the BLM in consultation with the USFWS.
Modification:	The boundaries of the stipulated area may be modified if the authorized officer, in consultation with the USFWS, determines that portions of the area are no longer critical to the peregrine falcon.
Waiver:	The stipulation maybe waived if the authorized officer, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat critical to the peregrine falcon or the peregrine falcon is declared recovered and no longer protected under the Endangered Species Act.

Special Status Species: Management Action 6

Resource:	Sensitive Raptor Species (golden eagle, osprey, burrowing owl, ferruginous hawk, Swainson's hawk, northern goshawk, prairie falcon and other raptors)
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of sensitive and other special status raptor nest sites (peregrine falcons and bald eagles addressed in management actions 1 and 4). At the present time raptors that would be addressed by management action 6 include ferruginous hawk, northern goshawk, Swainson's hawk, golden eagle, and burrowing owls.
Objective:	Limit nesting disturbance to raptors that have been identified as sensitive raptor species.
Exception:	An exception to this stipulation can be granted by the authorized officer if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area are no longer within ½ mile of raptor nest sites active within the past 7 years.
Waiver:	This stipulation can be waived if the authorized officer determines that the entire leasehold no longer is within ½ miles of raptor nest sites active within the past 7 years.

Special Status Species: Management Action 9

Resource:	Greater Sage-Grouse General Habitat Area Leks
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of sage-grouse leks.
Objective:	Limit disturbance to sage-grouse nesting habitat.
Exception:	None.
Modification:	The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting sage-grouse lek sites.
Waiver:	This stipulation can be waived if the authorized officer determines that the entire leasehold can be occupied without adversely affecting sage-grouse lek sites, or lek sites within ¼ mile of the leasehold have not been active for 5 consecutive years.

Special Status Species: Management Action 11

Resource:	Greater Sage-Grouse
Stipulation:	Timing Restriction: Surface use is prohibited within crucial sage-grouse winter range between December 1 and March 31 within crucial winter range for sage-grouse. Routine maintenance, production and emergency response activities are allowed.
Objective:	Within the Greater Sage-Grouse General Habitat Areas, maintain integrity of the habitat to support sustainable sage-grouse populations.
Exception:	<p>The authorized officer may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.</p> <ul style="list-style-type: none"> a) Surface disturbing/disruptive activities will prevent or minimize disturbance to sage-grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat. b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49

decibels at ¼ mile from the perimeter of the lek.

- c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 1 and June 30.
- d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
- e) Site and/or minimize linear ROWs to reduce disturbance to sagebrush habitats.
- f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
- g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
- h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
- i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
- j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
- k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
- l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
- m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
- n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.

Modification: The authorized officer may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat Area is nonessential or no longer sage-grouse habitat.

Waiver: This stipulation may be waived by the authorized officer, if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat Area have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 13

Resource: Greater Sage-Grouse General Habitat

Stipulation: Timing Restriction: Surface use would be prohibited from March 1 through June 30 in sage-grouse nesting habitat within 2 miles of a lek. This stipulation does not apply to the operation and maintenance of production facilities.

Objective: Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat, to support sustainable sage-grouse populations

Exception: The authorized officer may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.

- a) Surface disturbing/disruptive activities will prevent or minimize disturbance to sage-grouse or their habitat. Except as identified above or during emergency situations, activities will not

compromise the habitat.

- b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek.
- c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 1 and June 30.
- d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
- e) Site and/or minimize linear ROW to reduce disturbance to sagebrush habitats.
- f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
- g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
- h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
- i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
- j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
- k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
- l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
- m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
- n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.

Modification: The authorized officer may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat Area is nonessential or no longer sage-grouse habitat.

Waiver: This stipulation may be waived by the authorized officer, if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat Area have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 15

Resource: Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines

Stipulation: Sage-grouse requirements would be considered when designing or siting power lines near leks and within sage-grouse winter range.

Objective: Reduce collision hazards to sage grouse from power lines and reduce raptor predation on sage grouse within Greater Sage-Grouse General Habitat (GHMAs).

Exception: None.

Modification: None.

Waiver: None.

Special Status Species: Management Action 20

- Resource: Greater Sage-Grouse Priority Habitat Management Areas
- Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within Greater Sage-Grouse Priority Habitat Management Areas (PHMAs). See Map 2-4 for oil and gas operations would be considered when an oil and gas drilling, production, or plugging and abandonment plan is submitted to the BLM.
- Objective: Within Greater Sage-Grouse PHMAs maximize the integrity of the habitat, strive to maintain or improve sage-grouse populations, and at a minimum sage-grouse habitat so populations in the Greater Sage- Grouse PHMAs reflect population trends exhibited by representative sage-grouse trend data from SDGFP lek data (protection priority area controlled surface use).
- Exception: No waivers or modifications to a fluid mineral lease no-surface-occupancy stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease no-surface-occupancy stipulation only where the proposed action:
- (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
 - (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG.

Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP [revision or amendment]. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.

Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publically available at least quarterly."

Modification: None

Waiver: None

Special Status Species: Management Action 29

- Resource: Piping Plover Habitat
- Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of wetlands identified as piping plover habitat.
- Objective: Protection of piping plover habitat.
- Exception: An exception can be granted by the authorized officer if the operator submits a plan that demonstrates

that the proposed action will not affect the piping plover or its habitat. If the authorized officer determines that the action can affect the piping plover or its habitat, consultation with the USFWS will be required prior to final determination on the exception.

Modification: The boundaries of the stipulated area may be modified if the authorized officer, in consultation with USFWS, determines that portions of the area are no longer essential to the piping plover.

Waiver: The stipulation can be waived if the authorized officer, in consultation with USFWS, determines that the entire leasehold no longer contains habitat essential to the piping plover or the piping plover is declared recovered and is no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 31

Resource: Interior Least Tern Habitat

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of wetlands identified as least tern habitat.

Objective: Protection of interior least tern habitat.

Exception: An exception can be granted by the authorized officer if the operator submits a plan that demonstrates that the proposed action will not affect the least tern or its habitat. If the authorized officer determines that the action can affect the least tern or its habitat, consultation with the USFWS will be required prior to final determination on the exception.

Modification: The boundaries of the stipulated area can be modified if the authorized officer, in consultation with the USFWS, determines that portions of the area are no longer essential to the least tern.

Waiver: The stipulation can be waived if the authorized officer, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the least tern or the least tern is declared recovered and no longer protected under the Endangered Species Act.

Fisheries and Aquatics: Management Action 4

Resource: Fisheries and Aquatics

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of designated reservoirs with fisheries.

Objective: Protection of fisheries and aquatics species.

Exception: An exception to this stipulation can be granted by the authorized officer if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area can be modified if the authorized officer determines that portions of the area can be occupied without adversely affecting the fisheries and recreational values of the reservoir.

Waiver: This stipulation can be waived if the authorized officer determines that the entire leasehold is no longer a fishery, and it can be occupied without adversely affecting the recreational values of the reservoir.

Visual Resources Management (VRM): Management Action 2

Resource: Visual Resources

Stipulation: Controlled Surface Use: Surface-disturbing activities. Semi-permanent or permanent facilities in

VRM Class II, areas may require special design including location, size, and camouflage painting to blend with the natural surroundings and meet the visual quality objectives for the area (applied to all activities).

Objective: Protection of the aesthetic and scenic qualities of the landscape.

Exception: The authorized officer may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the authorized officer may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Visual Resources Management (VRM): Management Action 3

Resource: Visual Resources

Stipulation: No Surface Occupancy: Surface occupancy and use would be prohibited within developed recreation areas and undeveloped recreation areas receiving concentrated public use to protect visual resources.

Objective: Protection of the aesthetic and scenic qualities of the landscape within designated Special Recreation Management Areas.

Exception: The authorized officer may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the authorized officer may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Recreation: Management Action 12

Resource: Recreation

Stipulation: No Surface Occupancy: Surface occupancy and use would be prohibited within developed recreation areas and undeveloped recreation areas receiving concentrated public use.

Objective: Protection of ACEC and recreational values associated with SRMAs.

Exception: The authorized officer may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the authorized officer may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Lands and Realty, ROW Authorizations: Management Action 2

Resource: Visual Resources and Wildlife

Stipulation:	Consideration for burying fiber optic, telephone and power lines that can be safely buried to have least impact on resources would be evaluated at the project level.
Objective:	Protection of visual and scenic qualities while allowing for flexibility to avoid cultural or mitigate impacts to cultural sites.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Actions Common to All Alternatives

Resource:	Cultural Resources and Tribal Consultation
Stipulation:	This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.
Objective:	To protect significant historic properties and cultural resources.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Actions Common to All Alternatives

Resource:	Cultural Resource Survey
Stipulation:	<p>An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:</p> <ol style="list-style-type: none"> 1. The lessee or operator shall engage the services of a cultural resource consultant acceptable to the Surface Management Agency (SMA) to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard minimum to cover possible site relocation which may result from environmental or other considerations. Requirements for inventory methods including the size of standard APD survey areas would be followed as described in <i>Inventory Requirements for Proposed Well Sites, APD's - Well Pad/Block Inventory</i> in IM MT2015-043, or subsequent updates to this IM. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted. 2. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the

SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.

- Objective: Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.
- Exception: None.
- Modification: None.
- Waiver: None.

Paleontological Resources: Management Actions Common to All Alternatives

- Resource: Paleontological Resources – No Surface Occupancy
- Stipulation: Surface occupancy and use is prohibited within designated paleontological sites/localities.
- Objective: Preserve and protect significant vertebrate fossils and paleontological resources.
- Exception: An exception to this stipulation may be granted by the authorized officer if the lessee or operator submits a plan which demonstrates that the adverse impacts to significant paleontological resources can be mitigated through recovery and extensive recordation. Where impacts to paleontological resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy on that area must be prohibited.
- Modification: The boundaries of the stipulated area may be modified if the authorized officer determines that portions of the designated paleontological site/locality can be occupied without adversely affecting the resource values.
- Waiver: None.

Appendix E.2

Oil and Gas Stipulations – Alternative B

Summary List of Stipulations

Air Resources:

Refer to Lease Notices in Appendix E.7

Water Resources:

Management Action 1: NSO. Wetlands, Riparian Areas, Floodplains

Soil Resources:

Management Action 1: CSU. Sensitive Soils

Wildlife:

Management Action 2: NSO. Sharp-Tailed Grouse and Greater Prairie-Chicken Lek
 Management Action 4: TLS. Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Habitats
 Management Action 6: CSU. Sharp-Tailed Grouse and Prairie Chicken Nesting Area - Raptor Perches
 Management Action 7: CSU. Sharp-Tailed Grouse and Greater Prairie-Chicken - Underground Utility (Power and Transmission) Lines
 Management Action 8: TLS. Big Game Winter Range
 Management Action 10: NSO. Raptor Nest Sites Not Defined as Sensitive and Special Status
 Management Action 12: NSO. Bighorn Sheep Range

Special Status Species:

Management Action 1: NSO. Bald Eagle Nests
 Management Action 4: NSO. Peregrine Falcon Nests
 Management Action 6: NSO. Special Status Raptor Nests
 Management Action 9: NSO. Greater Sage-Grouse Lek
 Management Action 11: TLS. Greater Sage-Grouse Winter Range
 Management Action 13: TLS. Greater Sage-Grouse Nesting Habitat
 Management Action 15: CSU. Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines
 Management Action 20: NSO. Greater Sage-Grouse Priority Habitat Management Areas (PHMAs)
 Management Action 29: NSO. Piping Plover Habitat
 Management Action 31: NSO. Interior Least Tern Habitat

Fisheries and Aquatics:

Management Action 4: NSO. Reservoirs with Fisheries

Visual Resources:

Management Action 2: CSU. VRM Facilities Camouflage
 Management Action 3: NSO. VRM Special Recreation Management Areas

Recreation:

Management Action 12: NSO. Recreation

Lands and Realty:

Management Action 2: ROW Authorizations for Visual Resources and Wildlife

Public Safety:

Management Action 1: NSO. Abandoned Minuteman Missile Sites

Cultural Resources:

Management Common to All: Cultural Resources and Tribal Consultation

Management Common to All: Cultural Resource Survey Requirements

Management Action 3(a): NSO. National Register of Historic Places (NRHP) Eligible Properties/Districts

Management Action 3(b): NSO. Traditional Cultural Properties

Management Action 4: NSO. Igloo and Black Hills Army Depot (BHAD)

Paleontological Resources:

Management Common to All: NSO within Designated Paleontological Sites/Localities

Management Action 1: Paleontological Surveys and CSU in Potential Fossil Yield Classes 4 and 5

When applicable, stipulations developed for oil and gas development may be applied to other resource uses and activities pending environmental review at the project level (implementation level).

The BLM would inform affected landowners, local government, SDGFP and SD DENR when a waiver, exception or modification is being considered if such an action would directly affect resources or uses managed by these parties.

Waivers, Exceptions and Modifications (WEMs)

Waivers, exceptions, and modifications (WEMs) provide an effective means of applying “Adaptive Management” techniques to oil and gas leases and associated permitting activities to meet changing circumstances. The criteria for approval of exceptions, waivers, and modifications should be supported by National Environmental Policy Act (NEPA) analysis, either through the land use planning process or site-specific environmental review. An exception, waiver, or modification must be based on one of two criteria. According to 43 CFR 3101.1-4, “A stipulation included in an oil and gas lease shall be subject to modification or waiver only if the Authorized Officer (AO) determines that the factors leading to its inclusion in the lease have changed sufficiently to make the protection provided by the stipulation no longer justified or if the proposed operations would not cause unacceptable impacts.”

Definitions from BLM IM 2008-032

A **Lease Stipulation** is a condition of lease issuance that provides a level of protection for other resource values or land uses by restricting lease operations during certain times or locations or to avoid unacceptable impacts, to an extent greater than standard lease terms or regulations. A stipulation is an enforceable term of the lease contract, supersedes any inconsistent provisions of the standard lease form, and is attached to and made a part of the lease. Lease stipulations further implement the Bureau of Land Management’s (BLM) regulatory authority to protect resources or resource values. Lease stipulations are developed through the land use planning process.

A Condition of Approval (COA) means a site-specific and enforceable requirement included in an approved Application for Permit to Drill (APD) or Sundry Notice that may limit or amend the specific actions proposed by the operator. Conditions of Approval mitigate impacts to resource values or other uses of public lands. Refer to Appendix E-9 for more details.

Note: While the term lease “stipulation” is used frequently in this document, it should be noted that the concepts contained within this policy can also be applied with some adaptation to Terms and Conditions and to Conditions of Approval.

A waiver is a permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

An exception is a one-time exemption for a particular site within the leasehold; exceptions are determined on a case-by-

case basis; the stipulation continues to apply to all other sites within the leasehold. An exception is a limited type of waiver.

A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold to which the restrictive criteria are applied.

Oil and Gas Stipulations with Waivers, Exceptions and Modifications (WEMs) Alternative B

Air Resources:

Refer to Lease Notices in Appendix E.7.

Water Resources: Management Action 1

Resource:	Water and riparian vegetation
Stipulation:	No Surface Occupancy stipulation. Riparian areas, wetlands, 100 year floodplains of rivers and streams and water bodies and areas within 300 feet of these features would be managed as No Surface Occupancy and Use for oil and gas leasing. At the implementation level any proposed projects that are located in areas identified as a 100 year floodplain (currently defined by “flooded soils” in the NRCS data set – see Glossary) would be evaluated for features that the stipulation is designed to protect and the stipulation applied when such features are present.
Objective:	To protect the unique biological and hydrological features associated with wetlands, riparian areas, floodplains, streams, lakes, and reservoirs.
Exception:	The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality.
Modification:	The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain wetlands or riparian areas.
Waiver:	This stipulation may be waived by the AO if it is determined that the entire leasehold does not include wetlands, riparian areas, floodplains, streams, lakes, or reservoirs.

Soil Resources: Management Action 1

Resource:	Sensitive Soils
Stipulation:	Controlled Surface Use. Surface occupancy and use would be controlled on sensitive soils. Prior to surface disturbance on sensitive soils, a reclamation plan must be approved by the Authorized Officer (AO). The plan must demonstrate the following: (1) no other practicable alternatives exist for relocating the activity, (2) the activity will be located to reduce impacts to soil and water resources, (3) site productivity will be maintained or restored, (4) surface runoff and sedimentation will be adequately controlled, (5) on- and off-site areas will be protected from accelerated erosion, (6) that no areas susceptible to mass wasting would be disturbed and (7) surface-disturbing activities will be prohibited during extended wet periods. Waivers, exceptions, and modifications are described in Appendix E-4.

Objective:	To maintain the chemical, physical, and biotic properties of soils. This includes maintaining soil productivity, soil structure, soil stability, and soil biotic communities. This would prevent excessive erosion and improve the likelihood of successful reclamation.
Exception:	The AO may grant an exception to this stipulation if the operator can demonstrate that the proposed action will not contribute to degradation of the soil resource (e.g. excessive soil erosion, mass wasting, and/or lost productivity) or downslope resource conditions (e.g. reduced water quality due to sedimentation).
Modification:	The AO may modify the area affected by this stipulation if it is determined that portions of the leasehold do not contain sensitive soils.
Waiver:	The AO may waive this stipulation if it is determined that the entire leasehold does not contain sensitive soils.

Wildlife: Management Action 2

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chicken Leks
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of sharp-tailed grouse and greater prairie-chicken leks.
Objective:	Protection of sharp-tailed grouse and greater prairie-chicken nesting and brood rearing habitat.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer are within ¼ mile of sharp-tailed grouse and greater prairie-chicken leks.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer is within ¼ mile of sharp-tailed grouse and greater prairie-chicken leks.

Wildlife: Management Action 4

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Habitats
Stipulation:	Timing Restriction: Surface disturbance and disruptive activities would be avoided from March 1 to June 30 in sharp-tailed grouse and greater prairie-chicken nesting habitat within 2 miles of a lek. This restriction does not apply to the operation and maintenance of production facilities.
Objective:	Limit disturbance to sharp-tailed grouse and greater prairie-chicken during critical periods.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer contain sharp-tailed grouse or greater prairie-chicken nesting habitat within 2 miles of a lek. The dates for the timing restriction can be modified if new information indicates that the March 1 to June 30 dates are not valid for the leasehold.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed grouse or greater prairie-chicken nesting habitat within 2 miles of a lek.

Wildlife: Management Action 6

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Area Raptor Perches
Stipulation:	Sharp-tailed grouse or greater prairie-chicken requirements would be considered when designing or siting structures that are over 10 feet in height that create raptor perches within the 2 mile buffer of sharp-tailed grouse and greater prairie-chicken nesting areas.
Objective:	Reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	None.

Wildlife: Management Action 7

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chickens - Underground Utility (Power and Transmission) Lines
Stipulation:	Sharp-tailed grouse or greater prairie-chicken requirements would be considered when designing or siting power lines within a 2 mile buffer of nesting areas.
Objective:	Reduce hazards to grouse and greater prairie-chickens from power lines and reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	None.

Wildlife: Management Action 8

Resource:	Big Game Winter Range
Stipulation:	Timing Limitation: Surface disturbance and disruptive activities would be prohibited from December 1 to March 31 within winter range for big game.
Objective:	Maintain big game habit and avoid or minimize habitat loss and disturbance.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer contain crucial winter range for wildlife. The dates for the timing restriction can be modified if new wildlife use information indicates that the December 1 to March 31 dates are not valid for the leasehold.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer contains crucial winter range for wildlife.

Wildlife: Management Action 10

Resource:	Raptor nest sites not defined as sensitive and special status that were active within the last 7 years
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of raptor nests sites that were active within the last 7 breeding years.
Objective:	Limit nesting disturbance to raptors that are not identified as sensitive raptor species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ¼ mile of raptor nest sites active within the past 7 years.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer is within ¼ miles of raptor nest sites active within the past 7 years.

Wildlife: Management Action 12

Resource:	Bighorn Sheep Range
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited in designated bighorn sheep range.
Objective:	Limit disturbance to bighorn sheep.
Exception:	None.
Modification:	The boundaries of the stipulated area may be modified if the Authorized Officer (AO) determines that portions of the area no longer contain bighorn sheep habitat.
Waiver:	This stipulation may be waived if the AO determines that the entire leasehold no longer contains bighorn sheep habitat.

Special Status Species: Management Action 1

Resource:	Bald Eagle Nests
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of bald eagle nest sites active within the past 5 years and within bald eagle nesting habitat in riparian areas.
Objective:	Limit disturbance to bald eagle nesting habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect bald eagles or their habitat. If the AO determines that the action can affect bald eagles or their habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area can be occupied without adversely affecting bald eagle nest sites or nesting habitat.
Waiver:	This stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat or the bald eagle is declared recovered and no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 4

Resource:	Peregrine Falcon Nests
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of peregrine falcon nest sites that were active within the preceding 7 breeding seasons.
Objective:	Limit disturbance to peregrine falcon nesting habitat.
Exception:	An exception may be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the AO determines that the action may or will have an adverse effect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by the BLM in consultation with the USFWS.
Modification:	The boundaries of the stipulated area may be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer critical to the peregrine falcon.
Waiver:	The stipulation maybe waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat critical to the peregrine falcon, or the peregrine falcon is declared recovered and no longer protected under the Endangered Species Act.

Special Status Raptors: Management Action 6

Resource:	Golden eagle, burrowing owl, ferruginous hawk, Swainson’s hawk, osprey, prairie falcon, and northern goshawk. Does not include peregrine falcon or bald eagle.
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of sensitive and special status raptor nest sites that were active within the last 7 years. At the present time raptors that would be addressed by Management Action 6 include golden eagle, burrowing owl, ferruginous hawk, Swainson’s hawk, osprey, prairie falcon, and northern goshawk.
Objective:	Limit nesting disturbance to raptors that have been identified as sensitive raptor species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ¼ mile of raptor nest sites active within the past 7 years.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer is within ¼ miles of raptor nest sites active within the past 7 years.

Special Status Species: Management Action 9

Resource:	Greater Sage-Grouse General Habitat Leks
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of sage-grouse leks.
Objective:	Limit disturbance to sage-grouse nesting habitat.
Exception:	None.
Modification:	The boundaries of the stipulated area can be modified if the Authorized Officer (AO) determines that portions of the area can be occupied without adversely affecting sage-grouse lek sites. Coordination with SDGFP would be required prior to modifying this stipulation.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold can be occupied without adversely affecting sage-grouse lek sites, or lek sites within ½ mile of the leasehold have not been active for 5 consecutive years. Coordination with SDGFP would be required prior to waiving this stipulation.

Special Status Species: Management Action 11

Resource: Greater Sage-Grouse

Stipulation: Timing Restriction: Surface use is prohibited within crucial sage-grouse winter range between December 1 and March 31 within crucial winter range for sage-grouse. Routine maintenance, production and emergency response activities are allowed.

Objective: Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat to support sustainable sage-grouse populations.

Exception: The Authorized Officer (AO) may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.

- a) Surface disturbing/disruptive activities will prevent or minimize disturbance to sage-grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat.
- b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek.
- c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15.
- d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
- e) Site and/or minimize linear ROWs to reduce disturbance to sagebrush habitats.
- f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
- g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
- h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
- i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
- j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
- k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
- l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
- m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
- n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.

Modification: The AO may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat Area is nonessential or no longer sage-grouse habitat.

Waiver: This stipulation may be waived by the AO if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat Area have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 13

Resource: Greater Sage-Grouse General Habitat

Stipulation: Timing Restriction: Surface use would be prohibited from March 1 through July 15 in sage-grouse nesting habitat within 3 miles of a lek. This stipulation does not apply to the operation and maintenance of production facilities.

Objective: Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat, to support sustainable sage-grouse populations

Exception: The Authorized Officer (AO) may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.

- a) Surface disturbing/disruptive activities will prevent or minimize disturbance to sage-grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat.
- b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek.
- c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15.
- d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
- e) Site and/or minimize linear ROW to reduce disturbance to sagebrush habitats.
- f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
- g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
- h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
- i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
- j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
- k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
- l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
- m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
- n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.

Modification: The AO may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat is nonessential or no longer sage-grouse habitat.

Waiver: This stipulation may be waived by the AO, if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 15

Resource: Greater Sage-Grouse General Habitat Management Areas (GHMAs) - Underground Utility (Power and Transmission) Lines

Stipulation: Controlled Surface Use: All new utility and power lines that can be safely buried would be buried within 1 mile of sage-grouse leks and within sage-grouse winter range would be buried, designed or sited in a manner which would not impact sage-grouse on public lands.

Potential disturbance to cultural sites or other high resource values would be considered when decisions are made to require burial of power lines. In cases, where relocation of power lines is not possible, above ground lines may be allowed on all or part of a proposed power line route to avoid impacts to these resources provided the potential adverse impacts to wildlife or special status species are minimal as determined through project level environmental review.

Objective: Reduce collision hazards to sage-grouse from power lines and reduce raptor predation on sage-grouse within Greater Sage-Grouse General Habitat (GHMAs).

Exception: None.

Modification: None.

Waiver: This stipulation may be waived, if after consultation with the appropriate State and federal wildlife agencies, it is determined that significant portions of the Greater Sage-Grouse General Habitat has been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored.

Special Status Species: Management Action 20

Resource: Greater Sage-Grouse Priority Habitat Management Areas

Stipulation: No Surface Occupancy: Surface occupancy and use would be prohibited in Greater Sage-Grouse Priority Habitat Management Areas (PHMAs). See Map 2-4.

Objective: Within Greater Sage-Grouse PHMAs maximize the integrity of the habitat, strive to maintain or improve sage-grouse populations, and at a minimum sage-grouse habitat so populations in the Greater Sage- Grouse PHMAs reflect population trends exhibited by representative sage-grouse trend data from SDGFP lek data (protection priority area controlled surface use).

Exception: The Authorized Officer (AO), in consultation with South Dakota Game, Fish and Parks (SDGFP), may grant an exception if portions of the area can be occupied without adversely affecting sage-grouse leks.

Modification: The boundaries of the stipulated area may be modified if the AO, in consultation with SDGFP, determines that portions of the area can be occupied without adversely affecting sage-grouse leks. The AO, in consultation with SDGFP, may also modify the size and shape of the area based on studies documenting actual habitat suitability and/or local periods of actual use.

Waiver: The stipulation may be waived if the AO, in consultation with SDGFP, determines that the entire leasehold is no longer capable of supporting sage-grouse leks.

Special Status Species: Management Action 29

Resource:	Piping Plover Habitat
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of piping plover habitat.
Objective:	Protection of piping plover habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the piping plover or its habitat. If the AO determines that the action can affect the piping plover or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area may be modified if the AO, in consultation with USFWS, determines that portions of the area are no longer essential to the piping plover.
Waiver:	The stipulation can be waived if the AO, in consultation with USFWS, determines that the entire leasehold no longer contains habitat essential to the piping plover or the piping plover is declared recovered and is no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 31

Resource:	Interior Least Tern Habitat
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of interior least tern habitat.
Objective:	Protection of interior least tern habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the least tern or its habitat. If the AO determines that the action can affect the least tern or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer essential to the least tern.
Waiver:	The stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the least tern or the least tern is declared recovered and no longer protected under the Endangered Species Act.

Fisheries and Aquatics: Management Action 4

Resource:	Fisheries and Aquatics
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of reservoirs with fisheries.
Objective:	Protection of fisheries and aquatics species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area can be occupied without adversely affecting the fisheries and recreational values of the reservoir.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold is no longer a fishery, and it can be occupied without adversely affecting the recreational values of the reservoir.

Visual Resources Management (VRM): Management Action 2

Resource: Visual Resources

Stipulation: Controlled Surface Use: All surface-disturbing activities. Semi-permanent or permanent facilities may require special design including location, size, and camouflage or earth tone paint to blend with the natural surroundings and meet the visual quality objectives in VRM Classes II, III and IV.

Objective: Protection of the aesthetic and scenic qualities of the landscape.

Exception: The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Visual Resources Management (VRM): Management Action 3

Resource: Visual Resources

Stipulation: No Surface Occupancy: Surface occupancy and use would be prohibited in and within ½ mile buffer of the Exemption Area SRMA. Surface occupancy and use would be prohibited within ½ mile buffer around the Fort Meade SRMA/ACEC. (Minerals would be withdrawn within the Fort Meade SRMA/ACEC.)

Objective: Protection of the aesthetic and scenic qualities of the landscape within ½ mile of designated Special Recreation Management Areas.

Exception: The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Recreation: Management Action 12

Resource: Recreation

Stipulation: No Surface Occupancy: Surface occupancy and use would be prohibited within ½ mile of the Special Recreational Management Areas (SRMAs) including Fort Meade ACEC and Exemption Area.

Objective: Protection of ACEC and recreational values associated with SRMAs.

Exception: The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of

the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Lands and Realty, ROW Authorizations: Management Action 2

Resource: Visual Resources and Wildlife

Stipulation: Controlled Surface Use: All fiber optic, telephone and power lines that can be safely buried would be buried or sited to have least impact on resources. All other utility lines would be evaluated at the project level.

Objective: Protection of visual and scenic qualities while allowing for flexibility to avoid cultural or mitigate impacts to cultural sites.

Exception: Areas where damage to cultural resources cannot be mitigated may be excepted by the Authorized Officer (AO).

Modification: None.

Waiver: None.

Public Safety: Management Action 1

Resource: Public Safety – Abandoned Minuteman Missile Sites

Stipulation: Controlled Surface Use: Surface-disturbing activity at U.S. Air Force abandoned Minuteman missile sites would be restricted on the sites. Subsurface activity would be prohibited under the sites. Proposals for surface disturbance will be assessed on a case-by-case basis.

Objective: Protect the public and environment from movement of or contamination by potential residual hazardous waste.

Exception: This stipulation can be excepted by the AO if it is determined that the disturbance would not intercept and contribute to the spreading of potential residual wastes by a plan that addresses the design of the proposal, stockpiling and respreading of soil materials, and sampling and testing.

Modification: None.

Waiver: None.

Cultural Resources: Management Action Common to All Alternatives

Resource: Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Objective:	To protect significant historic properties and cultural resources.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action Common to All Alternatives

Resource:	Cultural Resource Survey
Stipulation:	<p>An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:</p> <ol style="list-style-type: none"> 1. The lessee or operator shall engage the services of a cultural resource consultant acceptable to the Surface Management Agency (SMA) to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard minimum to cover possible site relocation which may result from environmental or other considerations. Requirements for inventory methods including the size of standard APD survey areas would be followed as described in <i>Inventory Requirements for Proposed Well Sites, APD's - Well Pad/Block Inventory</i> in IM MT2015-043, or subsequent updates to this IM. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted. 2. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.
Objective:	Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action 3(a)

Resource:	National Register of Historic Places (NRHP) Eligible Properties/Districts – No Surface Occupancy
Stipulation:	Occupancy and use is prohibited within, and for a distance of 300 feet from the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible for the National Register of Historic Places, except for the Fort Meade Recreation Area National Historic District which is closed to oil and gas leasing.

Objective:	To protect significant cultural properties and archaeological districts and their settings, and to avoid disturbance or inadvertent impacts to these resources.
Exception:	An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impact to cultural properties eligible or potentially eligible for the National Register of Historic Places can be mitigated through data recovery, extensive recordation, or other acceptable means. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Managing Agency and/or BLM, surface occupancy of that area must be prohibited.
Modification:	The boundaries of the stipulated area may be modified if the AO determines that portions of the designated site or district can be occupied without adversely affecting the cultural resource values for which the site or area was designated eligible.
Waiver:	None.

NOTE: Compliance with Section 106 of NHPA is required for all actions that can affect cultural properties eligible for the National Register of Historic Places (NRHP).

Cultural Resources: Management Action 3(b)

Resource:	Traditional Cultural Properties – No Surface Occupancy
Stipulation:	Occupancy and Use is prohibited within, and for a distance of ½ mile from the boundaries of cultural properties determined to be of importance to Native American Tribal groups, sites determined to be Traditional Cultural Properties, and/or designated for traditional use. Such properties include (but are not limited to) burial locations, pictograph/petroglyph, vision quest locations, certain stone alignments, buttes or other uplift type landforms, plant gathering locations, and areas considered sacred or used for religious purposes.
Objective:	To avoid disturbance and to protect archaeological properties of known significance to Native American groups, as well as, traditional cultural properties and the setting in which they occur.
Exception:	An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that operations will be designed and/or located in such a manner as to have a minimal impact to the natural setting and characteristics of the immediate area and that adverse impacts to these traditional cultural properties can be mitigated in consultation with, and to the satisfaction of, affected Indian Tribes or Native American groups.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action 4

Resource:	Cultural Resources and Public Safety
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within the Igloo town site and the Black Hills Army Ordnance Depot.
Objective:	Protect significant historic properties and resources and prevent the movement of, or contamination by, potential hazardous materials within the abandoned Igloo town site and the Black Hills Army Ordnance Depot.
Exception:	None.

Modification: None.

Waiver: None.

Paleontological Resources: Management Action Common to All Alternatives

Resource: Paleontological Resources – No Surface Occupancy

Stipulation: Surface occupancy and use is prohibited within designated paleontological sites/localities and in significant paleontological sites regardless of designation. This includes Fossil Cycad ACEC.

Objective: Preserve and protect significant vertebrate fossils and paleontological resources.

Exception: An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impacts to significant paleontological resources can be mitigated through recovery and extensive recordation. Where impacts to paleontological resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy on that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the AO determines that portions of the designated paleontological site/locality can be occupied without adversely affecting the resource values or significance.

Waiver: None.

Paleontological Resources: Management Action 1

Resource: Paleontological Resource Inventory – Controlled Surface Use

Stipulation: In PFYC Classes 4 and 5, the Lessee shall be required to conduct a paleontological inventory prior to any surface disturbance. The lessee must engage the services of a qualified paleontologist, acceptable to the Surface Management Agency, to conduct the inventory. An acceptable inventory report is to be submitted to the BLM for review and approval at the time a surface-disturbing plan of operations is submitted.

Objective: Preserve and protect scientifically significant vertebrate fossils and paleontological locales.

Exception: An exception may be granted if the area has already been inventoried for paleontological resources.

Modification: None.

Waiver: None.

Appendix E.3

Oil and Gas Stipulations – Alternative C

Summary List of Stipulations

Air Resources:

Refer to Lease Notices in Appendix E.7.

Water Resources:

Management Action 1: NSO. Wetlands, Riparian Areas, Floodplains

Soil Resources:

Management Action 1: NSO. Sensitive Soils

Wildlife:

Management Action 2: NSO. Sharp-Tailed Grouse and Greater Prairie-Chicken Leaks
 Management Action 4: TLS. Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Habitats
 Management Action 6: CSU. Sharp-Tailed Grouse and Prairie Chicken Nesting Area - Raptor Perches
 Management Action 7: CSU. Sharp-Tailed Grouse and Greater Prairie-Chicken - Underground Utility (Power and Transmission) Lines
 Management Action 8: TLS. Big Game Winter Range
 Management Action 10: NSO. Raptor Nest Sites Not Defined as Sensitive and Special Status
 Management Action 12: NSO. Bighorn Sheep Range

Special Status Species:

Management Action 1: NSO. Bald Eagle Nests
 Management Action 4: NSO. Peregrine Falcon Nests
 Management Action 6: NSO. Special Status Raptor Nests
 Management Action 9: NSO. Greater Sage-Grouse Leaks
 Management Action 11: TLS. Greater Sage-Grouse Winter Range
 Management Action 13: TLS. Greater Sage-Grouse Nesting Habitat
 Management Action 15: CSU. Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines
 Management Action 20: NSO. Greater Sage-Grouse PHMAs
 Management Action 29: NSO. Piping Plover Habitat
 Management Action 31: NSO. Interior Least Tern Habitat

Fisheries and Aquatics:

Management Action 4: NSO. Reservoirs with Fisheries

Visual Resources:

Management Action 2: CSU. VRM Facilities Camouflage
 Management Action 3: NSO. VRM Special Recreation Management Areas

Recreation:

Management Action 12: NSO. Recreation

Lands and Realty:

Management Action 2: ROW Authorizations for Visual Resources and Wildlife

Public Safety:

Management Action 1: NSO. Abandoned Minuteman Missile Sites

Cultural Resources:

Management Common to All: Cultural Resources and Tribal Consultation

Management Common to All: Cultural Resource Survey Requirements

Management Action 3(a): NSO. National Register of Historic Places (NRHP) Eligible Properties/Districts

Management Action 3(b): NSO. Traditional Cultural Properties

Paleontological Resources:

Management Common to All: NSO within Designated Paleontological Sites/Localities

Management Action 1: Paleontological Surveys and CSU in Potential Fossil Yield Classes 3, 4 and 5

When applicable, stipulations developed for oil and gas development may be applied to other resource uses and activities pending environmental review at the project level (implementation level).

The BLM would inform affected landowners, local government, SDGFP and SD DENR when a waiver, exception or modification is being considered if such an action would directly affect resources or uses managed by these parties.

Waivers, Exceptions and Modifications (WEMs)

Waivers, exceptions, and modifications (WEMs) provide an effective means of applying “Adaptive Management” techniques to oil and gas leases and associated permitting activities to meet changing circumstances. The criteria for approval of exceptions, waivers, and modifications should be supported by National Environmental Policy Act (NEPA) analysis, either through the land use planning process or site-specific environmental review. An exception, waiver, or modification must be based on one of two criteria. According to 43 CFR 3101.1-4, “A stipulation included in an oil and gas lease shall be subject to modification or waiver only if the Authorized Officer (AO) determines that the factors leading to its inclusion in the lease have changed sufficiently to make the protection provided by the stipulation no longer justified or if the proposed operations would not cause unacceptable impacts.”

Definitions from BLM IM 2008-032

A **Lease Stipulation** is a condition of lease issuance that provides a level of protection for other resource values or land uses by restricting lease operations during certain times or locations or to avoid unacceptable impacts, to an extent greater than standard lease terms or regulations. A stipulation is an enforceable term of the lease contract, supersedes any inconsistent provisions of the standard lease form, and is attached to and made a part of the lease. Lease stipulations further implement the Bureau of Land Management’s (BLM) regulatory authority to protect resources or resource values. Lease stipulations are developed through the land use planning process.

Note: While the term lease “stipulation” is used frequently in this document, it should be noted that the concepts contained within this policy can also be applied with some adaptation to Terms and Conditions and to Conditions of Approval.

A Condition of Approval (COA) means a site-specific and enforceable requirement included in an approved Application for Permit to Drill (APD) or Sundry Notice that may limit or amend the specific actions proposed by the operator. Conditions of Approval mitigate impacts to resource values or other uses of public lands. Refer to Appendix E-9 for more details.

A waiver is a permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

An exception is a one-time exemption for a particular site within the leasehold; exceptions are determined on a case-by-

case basis; the stipulation continues to apply to all other sites within the leasehold. An exception is a limited type of waiver.

A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold to which the restrictive criteria are applied.

Oil and Gas Stipulations with Waivers, Exceptions and Modifications (WEMs) Alternative C

Air Resources:

Refer to Lease Notices in Appendix E.7.

Water Resources: Management Action 1

Resource:	Water and riparian vegetation
Stipulation:	No Surface Occupancy: Riparian areas, wetlands, 100 year floodplains of rivers and streams and water bodies and areas within 300 feet of these features would be managed as No Surface Occupancy and Use for oil and gas leasing. At the implementation level any proposed projects that are located in areas identified as a 100 year floodplain (currently defined by “flooded soils” in the NRCS data set – see Glossary) would be evaluated for features that the stipulation is designed to protect and the stipulation applied when such features are present.
Objective:	To protect the unique biological and hydrological features associated with wetlands, riparian areas, floodplains, streams, lakes, and reservoirs.
Exception:	The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality.
Modification:	The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain wetlands or riparian areas.
Waiver:	This stipulation may be waived by the AO if it is determined that the entire leasehold does not include wetlands, riparian areas, floodplains, streams, lakes, or reservoirs.

Soil Resources: Management Action 1

Resource:	Sensitive Soils
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited on sensitive soils for oil and gas leasing.
Objective:	To maintain the chemical, physical, and biotic properties of soils. This includes maintaining soil productivity, soil stability, and soil biotic properties. This will prevent excessive erosion, potential mass wasting, and improve the likelihood of successful reclamation.
Exception:	The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action will not contribute to degradation of the soil resource (e.g. excessive soil erosion, mass wasting, and/or lost productivity) or downslope resource conditions (e.g. reduced water quality due to sedimentation).

- Modification:** The AO may modify the area affected by this stipulation if it is determined that portions of the leasehold do not contain sensitive soils.
- Waiver:** The AO may waive this stipulation if it is determined that the entire leasehold does not contain sensitive soils.

Wildlife: Management Action 2

- Resource:** Sharp-tailed Grouse and Greater Prairie-Chicken Leks
- Stipulation:** No Surface Occupancy: Surface occupancy and use would be prohibited within ½ mile of sharp-tailed grouse and greater prairie-chicken leks.
- Objective:** Protection of sharp-tailed grouse and greater prairie-chicken nesting and brood rearing habitat.
- Exception:** An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification:** The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer are within ½ mile of sharp-tailed grouse and greater prairie-chicken leks.
- Waiver:** This stipulation can be waived if the AO determines that the entire leasehold no longer is within ½ mile of sharp-tailed grouse and greater prairie-chicken leks.

Wildlife: Management Action 4

- Resource:** Sharp-tailed Grouse and Greater Prairie-Chicken Nesting Habitats
- Stipulation:** Timing Restriction: Surface disturbance and disruptive activities would be prohibited from March 1 to June 30 in sharp-tailed grouse and greater prairie-chicken nesting habitat within 3 miles of a lek. This restriction does apply to the operation and maintenance of production facilities.
- Objective:** Limit disturbance to sharp-tailed grouse and greater prairie-chicken during critical periods.
- Exception:** An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification:** The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer contain sharp-tailed or greater prairie-chicken nesting habitat within 3 miles of a lek. The dates for the timing restriction can be modified if new information indicates that the March 1 to June 30 dates are not valid for the leasehold.
- Waiver:** This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed grouse or greater prairie-chicken nesting habitat within 3 miles of a lek.

Wildlife: Management Action 6

- Resource:** Sharp-tailed Grouse and Greater Prairie-Chicken Nesting Area Raptor Perches
- Stipulation:** Controlled Surface Use: Structures that are over 10 feet in height that create raptor perches would not be authorized or would require anti-perch devices within the 2 mile buffer of sharp-tailed grouse and greater prairie-chicken nesting areas.
- Objective:** Reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.

Exception: None.

Modification: None.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed or greater prairie-chicken nesting habitat within 2 miles of a lek.

Wildlife: Management Action 7

Resource: Sharp-tailed Grouse and Greater Prairie-Chickens - Underground Utility (Power and Transmission) Lines

Stipulation: Controlled Surface Use: All new power lines must be buried, designed or sited in a manner which does not impact sharp-tailed grouse or greater prairie-chickens within a 2 mile buffer of leks.

Objective: Reduce hazards to grouse and greater prairie-chickens from power lines and reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.

Exception: None..

Modification: None.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed or greater prairie-chicken nesting habitat within 2 miles of a lek.

Wildlife: Management Action 8

Resource: Big Game Winter Range

Stipulation: Timing Limitation: Surface use is prohibited from December 1 and March 31 within winter range for big game.

Objective: Maintain big game habit and avoid or minimize habitat loss and disturbance.

Exception: An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer contain crucial winter range for wildlife. The dates for the timing restriction can be modified if new wildlife use information indicates that the December 1 to March 31 dates are not valid for the leasehold.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer contains crucial winter range for wildlife.

Wildlife: Management Action 10

Resource: Raptor nest sites not belonging to special status species that were active within the last 7 years.

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of raptor nests sites that were active within the last 7 breeding years.

Objective: Limit nesting disturbance to raptors that are not identified as sensitive raptor species.

Exception: An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits

a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ½ mile of raptor nest sites active within the past 7 years.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer is within ½ miles of raptor nest sites active within the past 7 years.

Wildlife: Management Action 12

Resource: Bighorn Sheep Range

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited in designated bighorn sheep range.

Objective: Limit disturbance to bighorn sheep.

Exception: None.

Modification: The boundaries of the stipulated area may be modified if the Authorized Officer (AO) determines that portions of the area no longer contain bighorn sheep habitat.

Waiver: This stipulation may be waived if the AO determines that the entire leasehold no longer contains bighorn sheep habitat.

Special Status Species: Management Action 1

Resource: Bald Eagle Nests

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of bald eagle nest sites active within the past 5 years.

Objective: Limit disturbance to bald eagle nesting habitat.

Exception: An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect bald eagles or their habitat. If the AO determines that the action can affect bald eagles or their habitat, consultation with the USFWS will be required prior to final determination on the exception.

Modification: The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area can be occupied without adversely affecting bald eagle nest sites or nesting habitat.

Waiver: This stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat or the bald eagle is declared recovered and no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 4

Resource: Peregrine Falcon Nests

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within 1 mile of peregrine falcon nest sites that were active within the preceding 7 breeding seasons.

Objective: Limit disturbance to peregrine falcon nesting habitat.

Exception: An exception may be granted by the Authorized Officer (AO) if the operator submits a plan that

demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the AO determines that the action may or will have an adverse effect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by the BLM in consultation with the USFWS.

Modification: The boundaries of the stipulated area may be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer critical to the peregrine falcon.

Waiver: The stipulation maybe waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat critical to the peregrine falcon or the peregrine falcon is declared recovered and no longer protected under the Endangered Species Act.

Special Status Raptors: Management Action 6

Resource: Golden eagle, burrowing owl, ferruginous hawk, Swainson's hawk, osprey, prairie falcon, and northern goshawk. Does not include peregrine falcon or bald eagle.

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of sensitive and other special status raptor nest sites that were active within the last 7 years. At the present time raptors that would be addressed by Management Action 6 include golden eagle, burrowing owl, ferruginous hawk, Swainson's hawk, osprey, prairie falcon, and northern goshawk.

Objective: Limit nesting disturbance to raptors that have been identified as sensitive raptor species.

Exception: An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ½ mile of raptor nest sites active within the past 7 years.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer is within ½ mile of raptor nest sites active within the past 7 years.

Special Status Species: Management Action 9

Resource: Greater Sage-Grouse General Habitat Leks

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within 1 mile of sage-grouse leks.

Objective: Limit disturbance to sage-grouse nesting habitat.

Exception: None.

Modification: The boundaries of the stipulated area can be modified if the Authorized Officer (AO) determines that portions of the area can be occupied without adversely affecting sage-grouse lek sites. Coordination with SDGFP would be required prior to modifying this stipulation.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold can be occupied without adversely affecting sage-grouse lek sites, or lek sites within 1 mile of the leasehold have not been active for 5 consecutive years. Coordination with SDGFP would be required prior to waiving this stipulation.

Special Status Species: Management Action 11

Resource: Greater Sage-Grouse

- Stipulation:** Timing Restriction: Surface use is prohibited within crucial sage-grouse winter range between December 1 and March 31. Routine maintenance, production and emergency response activities are allowed.
- Objective:** Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat to support sustainable sage-grouse populations.
- Exception:** The Authorized Officer (AO) may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for Greater Sage-Grouse and meet the goals for sage-grouse habitat.
- a) Surface disturbing/disruptive activities will prevent or minimize disturbance to sage-grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat.
 - b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek.
 - c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15.
 - d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
 - e) Site and/or minimize linear ROWs to reduce disturbance to sagebrush habitats.
 - f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
 - g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
 - h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
 - i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
 - j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
 - k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
 - l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
 - m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
 - n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.
- Modification:** The AO may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat is nonessential or no longer sage-grouse habitat.
- Waiver:** This stipulation may be waived by the AO if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 13

Resource:	Greater Sage-Grouse General Habitat
Stipulation:	Timing Restriction: Surface use would be prohibited from March 1 through July 15 in sage-grouse nesting habitat within 4 miles of a lek. This stipulation does not apply to the operation and maintenance of production facilities.
Objective:	Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat, to support sustainable sage-grouse populations
Exception:	<p>The Authorized Officer (AO) may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.</p> <ul style="list-style-type: none"> a) Surface disturbing/disruptive activities will prevent or minimize disturbance to Greater Sage-Grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat. b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek. c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15. d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas. e) Site and/or minimize linear ROW to reduce disturbance to sagebrush habitats. f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors. g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse. h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse. i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use. j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes. k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community. l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse. m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses. n) Consider creation of a “Mitigation Trust Account” when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.
Modification:	The AO may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat is nonessential or no longer sage-grouse habitat.
Waiver:	This stipulation may be waived by the AO if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat Area have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 15

Resource: Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines

Stipulation: Controlled Surface Use: All new utility and power lines that can be safely buried would be buried within 2 mile of sage-grouse leks and within sage-grouse winter range would be buried or eliminated on public lands.

When burial of power lines is not possible, above ground lines will be located and designed to minimize impacts of predation, collision and other associated stressors to sage-grouse.

Existing overhead lines within 2 miles of leks and within sage-grouse winter range would be evaluated for threats to sage-grouse and if necessary, modified to reduce the threat. If modification would not likely be effective, the overhead line may be relocated. Any requirements for modification or relocation of existing overhead lines would be subject to valid existing rights.

Potential disturbance to cultural sites or other high resource values would be considered when decisions are made to require burial of power lines. Subject to valid existing rights, BLM may require modification of existing power lines if adverse impacts or risk to wildlife or special status species are determined to be present pending project level environmental review.

Objective: Reduce collision hazards to sage-grouse from power lines and reduce raptor predation on sage-grouse within Greater Sage-Grouse General Habitat (GHMAs).

Exception: None.

Modification: None.

Waiver: This stipulation may be waived, if after consultation with the appropriate State and federal wildlife agencies, it is determined that significant portions of the Greater Sage-Grouse General Habitat Area has been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored.

Special Status Species: Management Action 20

Resource: Greater Sage-Grouse

Stipulation: Greater Sage-Grouse Priority Habitat Management Areas (PHMAs) would be closed to oil and gas development. See Map 2-4.

Objective: Within Greater Sage-Grouse PHMAs maximize the integrity of the habitat, strive to maintain or improve sage-grouse populations, and at a minimum sage-grouse habitat so populations in the Greater Sage- Grouse PHMAs reflect population trends exhibited by representative sage-grouse trend data from SDGFP lek data (protection priority area controlled surface use).

Exception: None.

Modification: None.

Waiver: None.

Special Status Species: Management Action 29

Resource: Piping Plover Habitat

Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of piping plover habitat.
Objective:	Protection of piping plover habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the piping plover or its habitat. If the AO determines that the action can affect the piping plover or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area may be modified if the AO, in consultation with USFWS, determines that portions of the area are no longer essential to the piping plover.
Waiver:	The stipulation can be waived if the AO, in consultation with USFWS, determines that the entire leasehold no longer contains habitat essential to the piping plover or the piping plover is declared recovered and is no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 31

Resource:	Interior Least Tern Habitat
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of interior least tern habitat.
Objective:	Protection of interior least tern habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the least tern or its habitat. If the AO determines that the action can affect the least tern or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer essential to the least tern.
Waiver:	The stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the least tern or the least tern is declared recovered and no longer protected under the Endangered Species Act.

Fisheries and Aquatics: Management Action 4

Resource:	Fisheries and Aquatics
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of reservoirs with fisheries.
Objective:	Protection of fisheries and aquatics species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area can be occupied without adversely affecting the fisheries and recreational values of the reservoir.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold is no longer a fishery, and it can be occupied without adversely affecting the recreational values of the reservoir.

Visual Resources Management (VRM): Management Action 2

Resource:	Visual Resources
Stipulation:	Controlled Surface Use: All surface-disturbing activities. Semi-permanent or permanent facilities may require special design including location, size, and camouflage or earth tone paint to blend with the natural surroundings and meet the visual quality objectives in VRM Classes II, III and IV.
Objective:	Protection of the aesthetic and scenic qualities of the landscape.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.
Modification:	None.
Waiver:	None.

Visual Resources Management (VRM): Management Action 3

Resource:	Visual Resources
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within 1 mile of Fort Meade ACEC and other developed recreation sites.
Objective:	Protection of the aesthetic and scenic qualities of the landscape within 1 mile of designated Special Recreation Management Areas.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.
Modification:	None.
Waiver:	None.

Recreation: Management Action 12

Resource:	Recreation
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within 1 mile of the Special Recreational Management Areas (SRMAs) including Fort Meade ACEC and Exemption Area.
Objective:	Protection of ACEC and recreational values associated with SRMAs.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.
Modification:	None.
Waiver:	None.

Lands and Realty, ROW Authorizations: Management Action 2

Resource:	Visual Resources and Wildlife
Stipulation:	Controlled Surface Use: All fiber optic, telephone and power lines would be buried.
Objective:	Protection of visual and scenic qualities while allowing for flexibility to avoid cultural or mitigate impacts to cultural sites.
Exception:	Areas where damage to cultural resources cannot be mitigated may be excepted by the Authorized Officer (AO).
Modification:	None.
Waiver:	None.

Public Safety: Management Action 1

Resource:	Public Safety Abandoned Minuteman Missile Sites
Stipulation:	Controlled Surface Use: Surface-disturbing activity at U.S. Air Force abandoned Minuteman missile sites would be restricted on the sites and approximately 1/8 mile (approximately 200 meters) beyond the sites. Subsurface activity would be prohibited under the sites and approximately 1/8 mile (approximately 200 meters) beyond the sites.
Objective:	Protect the public and environment from movement of or contamination by potential residual hazardous waste.
Exception:	This stipulation can be excepted by the Authorized Officer (AO) if it is determined that the disturbance would not intercept and contribute to the spreading of potential residual wastes by a plan that addresses the design of the proposal, stockpiling and respreading of soil materials, and sampling and testing.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action Common to All Alternatives

Resource:	Cultural Resources and Tribal Consultation
Stipulation:	This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.
Objective:	To protect significant historic properties and cultural resources.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action Common to All Alternatives

Resource:	Cultural Resource Survey
Stipulation:	<p>An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:</p> <ol style="list-style-type: none"> 1. The lessee or operator shall engage the services of a cultural resource consultant acceptable to the Surface Management Agency (SMA) to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard minimum to cover possible site relocation which may result from environmental or other considerations. Requirements for inventory methods including the size of standard APD survey areas would be followed as described in <i>Inventory Requirements for Proposed Well Sites, APD's - Well Pad/Block Inventory</i> in IM MT2015-043, or subsequent updates to this IM. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted. 2. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.
Objective:	Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.
Exception:	None.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action 3(a)

Resource:	National Register of Historic Places (NRHP) Eligible Properties/Districts – No Surface Occupancy
Stipulation:	Occupancy and use is prohibited within, and for a distance of 300 feet from the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible for the National Register of Historic Places, except for the Fort Meade Recreation Area National Historic District, Black Hills Army Depot (BHAD) and Igloo Town Site National Historic District, and the Bear Butte National Historic Landmark, which are closed to oil and gas leasing.
Objective:	To protect significant cultural properties and archaeological districts and their settings, and to avoid disturbance or inadvertent impacts to these resources.
Exception:	An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impact to cultural properties eligible or potentially eligible for the National Register of Historic Places can be mitigated through data recovery, extensive recordation, or other acceptable means. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Managing Agency and/or BLM, surface occupancy of that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the AO determines that portions of the designated site or district can be occupied without adversely affecting the cultural resource values for which the site or area was designated eligible.

Waiver: None.

NOTE: Compliance with Section 106 of NHPA is required for all actions that can affect cultural properties eligible for the National Register of Historic Places (NRHP).

Cultural Resources: Management Action 3(b)

Resource: Traditional Cultural Properties – No Surface Occupancy

Stipulation: Occupancy and Use is prohibited within, and for a distance of ½ mile from the boundaries of cultural properties determined to be of importance to Native American Tribal groups, sites determined to be Traditional Cultural Properties, and/or designated for traditional use. Such properties include (but are not limited to) burial locations, pictograph/petroglyph, vision quest locations, certain stone alignments, buttes or other uplift type landforms, plant gathering locations, and areas considered sacred or used for religious purposes.

Objective: To avoid disturbance and to protect archaeological properties of known significance to Native American groups, as well as, traditional cultural properties and the setting in which they occur.

Exception: An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that operations will be designed and/or located in such a manner as to have a minimal impact to the natural setting and characteristics of the immediate area and that adverse impacts to these traditional cultural properties can be mitigated in consultation with, and to the satisfaction of, affected Indian Tribes or Native American groups.

Modification: None.

Waiver: None.

Paleontological Resources: Management Action Common to All Alternatives

Resource: Paleontological Resources – No Surface Occupancy

Stipulation: Surface occupancy and use is prohibited within designated paleontological sites/localities and in significant paleontological sites regardless of designation, except the Fossil Cycad ACEC, which is closed to leasing.

Objective: Preserve and protect significant vertebrate fossils and paleontological resources.

Exception: An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impacts to significant paleontological resources can be mitigated through recovery and extensive recordation. Where impacts to paleontological resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy on that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the AO determines that portions of the designated paleontological site/locality can be occupied without adversely affecting the resource values or significance.

Waiver: None.

Paleontological Resources: Management Action 1

Resource:	Paleontological Resource Inventory – Controlled Surface Use
Stipulation:	In areas known to have a high potential (Classes 3, 4 and 5) for containing significant paleontological resources, the Lessee shall be required to conduct a paleontological inventory prior to any surface disturbance. The lessee must engage the services of a qualified paleontologist, acceptable to the Surface Management Agency, to conduct the inventory. An acceptable inventory report is to be submitted to the BLM for review and approval at the time a surface-disturbing plan of operations is submitted.
Objective:	Preserve and protect scientifically significant vertebrate fossils and paleontological locales.
Exception:	An exception may be granted if the area has already been inventoried for paleontological resources.
Modification:	None.
Waiver:	None.

Appendix E.4

Oil and Gas Stipulations – Alternative D (Proposed Action)

Summary List of Stipulations

Air Resources:

Management Action 1: Controlled Surface Use. Tier 4 Engine Requirements - Nitrogen Oxides.

Water Resources:

Management Action 1: NSO. Wetlands, Riparian Areas, Floodplains
 Management Action 2: CSU. Water, Riparian, Wetlands
 Management Action 4: NSO. Source Water Protection Areas

Soil Resources:

Management Action 1: CSU. Sensitive Soils
 Management Action 3: NSO. Badlands and Rock Outcrop

Wildlife:

Management Action 2: NSO. Sharp-Tailed Grouse and Greater Prairie-Chicken Lek
 Management Action 4: TLS. Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Habitats
 Management Action 5: CSU. Sharp-Tailed Grouse and Prairie Chicken Nesting Area - Raptor Perches
 Management Action 6: CSU. Sharp-Tailed Grouse and Greater Prairie-Chicken - Underground Utility (Power and Transmission) Lines
 Management Action 7: TLS. Big Game Winter Range
 Management Action 9: NSO. Raptor Nest Sites Not Defined as Sensitive and Special Status.
 Management Action 10: TLS. Active Raptor Nest Sites
 Management Action 16: NSO. Bighorn Sheep Range
 Management Action 20: NSO. Colonial Nesting Water Birds
 Management Action 21: TLS. Colonial Nesting Water Birds

Special Status Species:

Management Action 1: NSO. Bald Eagle Nests
 Management Action 4: NSO. Peregrine Falcon Nests
 Management Action 6: NSO. Special Status Raptor Nests
 Management Action 7: TLS. Special Status Species Raptor Nests
 Management Action 11: NSO. Greater Sage-Grouse Lek
 Management Action 14: TLS. Greater Sage-Grouse Winter Range
 Management Action 16: CSU. Greater Sage-Grouse Nesting Habitat
 Management Action 18: CSU. Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines
 Management Action 22: NSO. Greater Sage-Grouse Priority Habitat Management Areas (PHMAs)
 Management Action 29: NSO. Sage Grouse Winter Range in PHMAs
 Management Action 34: NSO. Piping Plover Habitat
 Management Action 36: NSO. Interior Least Tern Habitat
 Management Action 38: LN. Sprague's Pipit Habitat
 Management Action 43: LN. Prairie Dog Habitat
 Management Action 46: LN. Black-footed Ferret Habitat
 Management Action 49: LN. Pallid and Shovel-nosed Sturgeon

Fisheries and Aquatics:

Management Action 4: NSO. Fisheries and Aquatics

Visual Resources:

Management Action 2: CSU. VRM Facilities Camouflage

Management Action 3: NSO. VRM Special Recreation Management Areas

Recreation:

Management Action 12: NSO. Recreation - SRMAs

Lands and Realty:

Management Action 2: ROW Authorizations for Visual Resources and Wildlife

Public Safety:

Management Action 1: NSO. Abandoned Minuteman Missile Sites

Cultural Resources:

Management Common to All: Cultural Resources and Tribal Consultation

Management Common to All: Cultural Resource Survey Requirements

Management Action 3(a): NSO: National Register of Historic Places (NRHP) Eligible Properties/Districts

Management Action 3(b): NSO: Traditional Cultural Properties

Management Action 4: NSO and Closed. Igloo and Black Hills Army Depot (BHAD)

Management Action 5: NSO: National Historic Trails

Paleontological Resources:

Management Common to All: NSO within Designated Paleontological Sites/Localities

Management Action 1: CSU: Paleontological Inventory - Potential Fossil Yield Classes 3, 4 and 5

When applicable, stipulations developed for oil and gas development may be applied to other resource uses and activities pending environmental review at the project level (implementation level).

The BLM would inform affected landowners, local government, SDGFP and SD DENR when a waiver, exception or modification is being considered if such an action would directly affect resources or uses managed by these parties.

Waivers, Exceptions and Modifications (WEMs)

Waiver, exceptions, and modifications (WEMs) provide an effective means of applying “Adaptive Management” techniques to oil and gas leases and associated permitting activities to meet changing circumstances. The criteria for approval of exceptions, waivers, and modifications should be supported by National Environmental Policy Act (NEPA) analysis, either through the land use planning process or site-specific environmental review. An exception, waiver, or modification must be based on one of two criteria. According to 43 CFR 3101.1-4, “A stipulation included in an oil and gas lease shall be subject to modification or waiver only if the Authorized Officer (AO) determines that the factors leading to its inclusion in the lease have changed sufficiently to make the protection provided by the stipulation no longer justified or if the proposed operations would not cause unacceptable impacts.”

No waivers or modifications to a fluid mineral lease no-surface-occupancy stipulation will be granted. The Authorized Officer may grant an exception to a fluid mineral lease no-surface-occupancy stipulation only where the proposed action:

- (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat, or,
- (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would

provide a clear conservation gain to GRSG.

Exceptions based on conservation gain may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts.

Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such findings shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publically available at least quarterly.

Definitions from BLM IM 2008-032

A **Lease Stipulation** is a condition of lease issuance that provides a level of protection for other resource values or land uses by restricting lease operations during certain times or locations or to avoid unacceptable impacts, to an extent greater than standard lease terms or regulations. A stipulation is an enforceable term of the lease contract, supersedes any inconsistent provisions of the standard lease form, and is attached to and made a part of the lease. Lease stipulations further implement the Bureau of Land Management's (BLM) regulatory authority to protect resources or resource values. Lease stipulations are developed through the land use planning process.

Note: While the term lease "stipulation" is used frequently in this document, it should be noted that the concepts contained within this policy can also be applied with some adaptation to Terms and Conditions and to Conditions of Approval.

A Condition of Approval (COA) means a site-specific and enforceable requirement included in an approved Application for Permit to Drill (APD) or Sundry Notice that may limit or amend the specific actions proposed by the operator. Conditions of Approval mitigate impacts to resource values or other uses of public lands. Refer to Appendix E-9 for more details.

A waiver is a permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

An exception is a one-time exemption for a particular site within the leasehold; exceptions are determined on a case-by-case basis; the stipulation continues to apply to all other sites within the leasehold. An exception is a limited type of waiver.

A modification is a change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Depending on the specific modification, the stipulation may or may not apply to all sites within the leasehold to which the restrictive criteria are applied. Oil and Gas Stipulations with Waivers, Exceptions and Modifications (WEMs)

Oil and Gas Stipulations with Waivers, Exceptions and Modifications (WEMs) Alternative D (Proposed Action)

Air Resources: Management Action 1:

Resource:	Air Resources
Stipulation:	<u>Controlled Surface Use Stipulation:</u> Surface occupancy or use is subject to the following special operating constraint: Ensure that each diesel-fueled nonroad engine with greater than 200 horsepower (hp) design rating to be used during drilling or completion activities meets one of the following two criteria: (1) the engine was manufactured to meet U.S. Environmental Protection Agency (EPA) nitrogen oxides (NO _x) emission standards for Tier 4 nonroad diesel engines, or (2) the engine emits NO _x at rates less than or equal to EPA emission standards for Tier 4 nonroad diesel engines. Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes.
Objective:	For the purpose of: Protecting air resources and ensuring compliance with the 1-hour nitrogen dioxide (NO ₂) National Ambient Air Quality Standard (NAAQS).
Exception:	An exception may be granted by the authorized officer if air quality modeling, air quality monitoring, or other information demonstrates compliance with the 1-hour NO ₂ NAAQS.
Modification:	This stipulation may be modified if the EPA or the South Dakota Department of Environment and Natural Resources (DENR) deletes, or revises NO _x emission standards for drill rig, completion rig, or nonroad engines.
Waiver:	The stipulation may be waived if air quality modeling, air quality monitoring, or other information demonstrates that all drilling and completion activity within the lease area will meet the 1-hour NO ₂ NAAQS. The stipulation may also be waived if the 1-hour NO ₂ NAAQS is revoked or otherwise rendered inapplicable to drilling/completion operations.

Water Resources: Management Action 1

Resource:	Water, Riparian, Wetland, Floodplains
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within perennial or intermittent streams, lakes, ponds, reservoirs, 100-year floodplains, wetlands, and riparian areas.
Objective:	To protect the unique biological and hydrological features and functions associated with perennial and intermittent streams, lakes, ponds, reservoirs, floodplains, wetlands, and riparian areas.
Exception:	No exceptions would be allowed in streams, natural lakes, or wetlands. An exception may be granted by the authorized officer for riparian areas, floodplains, and artificial ponds or reservoirs if the operator can demonstrate that: (1) there are no practicable alternatives to locating facilities in these areas, (2) the proposed actions would maintain or enhance resource functions, and (3) all reclamation goals and objectives would be met.
Modification:	The authorized officer may modify the boundaries of the stipulated area if it is determined that portions of the leasehold do not include these types of areas.
Waiver:	The authorized officer may waive this stipulation if it is determined that the entire leasehold does not include these types of areas.

Water Resources: Management Action 2

Resource:	Water, Riparian, Wetlands
Stipulation:	Controlled Surface Use: Surface occupancy and use would be controlled within 300 feet of riparian and/or wetland areas. Surface-disturbing activities would require a plan with design features that demonstrate how all actions would maintain and/or improve the functionality of riparian/wetland areas. The plan will address: (a) potential impacts to riparian and wetland resources, (b) mitigation to reduce impacts to acceptable levels (including timing restrictions), (c) post project restoration, and (d) monitoring (the operator must conduct monitoring capable detecting early signs of changing riparian and/or wetland conditions).
Objective:	To protect the unique biological and hydrological features associated with wetland and riparian areas. Disturbances adjacent to wetland and/or riparian areas (including road use) can adversely impact these sensitive areas. This stipulation would protect these features from indirect effects produced within the adjacent ground. This would also encompass the floodplain along most first to third order streams.
Exception:	The Authorized Officer (AO) may grant an exception to this stipulation if the operator can demonstrate that the proposed action would not adversely impact wetland or riparian function or associated water quality.
Modification:	The area affected by this stipulation can be modified by the AO if it is determined that portions of the lease area do not contain wetlands or riparian areas.
Waiver:	This stipulation can be waived by the AO if it is determined that the entire lease area does not contain wetlands or riparian areas.

Water Resources: Management Action 4

Resource:	Source Water Protection Areas
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within State-designated Source Water Protection Areas.
Objective:	To protect human health by minimizing the potential contamination of public water systems. Source water is untreated water from streams, rivers, lakes, or aquifers used to supply public water systems. Ensuring that source water is protected from contamination can reduce the costs of treatment and risks to public health. This stipulation would protect the State-designated Source Water Protection Areas that protect public water systems from potential contamination.
Exception:	The authorized officer may not grant exceptions to this stipulation.
Modification:	The authorized officer may modify the boundaries of the stipulated area if it is determined that portions of the leasehold do not include Source Water Protection Areas.
Waiver:	The authorized officer may waive this stipulation if it is determined that the entire leasehold does not include Source Water Protection Areas.

Soil Resources: Management Action 1

Resource:	Sensitive Soils
Stipulation:	Controlled Surface Use: Surface occupancy and use will be controlled on sensitive soils. Prior to surface disturbance on sensitive soils, a reclamation plan must be approved by the Authorized Officer (AO). The plan must demonstrate the following: (1) no other practicable alternatives exist for

relocating the activity, (2) the activity will be located to reduce impacts to soil and water resources, (3) site productivity will be maintained or restored, (4) surface runoff and sedimentation will be adequately controlled, (5) on- and off-site areas will be protected from accelerated erosion, (6) that no areas susceptible to mass wasting would be disturbed and (7) surface-disturbing activities will be prohibited during extended wet periods.

- Objective:** To maintain the chemical, physical, and biotic properties of soils. This includes maintaining soil productivity, soil stability, and soil biotic communities. This will prevent excessive erosion, potential mass wasting, and improve the likelihood of successful reclamation.
- Exception:** The AO may grant an exception to this stipulation if the operator can demonstrate that the proposed action will not contribute to degradation of the soil resource (e.g. excessive soil erosion, mass wasting, and/or lost productivity) or downslope resource conditions (e.g. reduced water quality due to sedimentation).
- Modification:** The AO may modify the area affected by this stipulation if it is determined that portions of the leasehold do not contain sensitive soils.
- Waiver:** The AO may waive this stipulation if it is determined that the entire leasehold does not contain sensitive soils.

Soil Resources: Management Action 3

- Resource:** Badlands, Rock Outcrop
- Stipulation:** No Surface Use: Surface occupancy and use is prohibited on badland formations and rock outcrop.
- Objective:** To prevent excessive soil erosion and to avoid disturbing areas subject to potential reclamation problems.
- Exception:** The authorized officer may not grant exceptions to this stipulation.
- Modification:** The authorized officer may modify the area affected by this stipulation if it is determined that portions of the leasehold do not include these types of areas.
- Waiver:** The authorized officer may waive this stipulation if it is determined that the entire leasehold does not include these types of areas.

Wildlife: Management Action 2

- Resource:** Sharp-Tailed Grouse and Greater Prairie-Chicken Leks
- Stipulation:** Controlled Surface Use: Oil and gas leasing within 2 miles of a lek would be subject to a plan approved by BLM that provides adequate mitigation measures and conservation actions to protect breeding, nesting, and brood-rearing habitats and limit disturbance in a manner that will support the long-term populations associated with the lek and surrounding habitat.
- Objective:** Protection of sharp-tailed grouse and greater prairie-chicken nesting and brood rearing habitat.
- Exception:** An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification:** The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer are within 2 mile of sharp-tailed grouse and greater prairie-chicken leks.
- Waiver:** This stipulation can be waived if the AO determines that the entire leasehold no longer is within 2 mile of sharp-tailed grouse and greater prairie-chicken leks.

Wildlife: Management Action 5

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chicken Nesting Area Raptor Perches
Stipulation:	Controlled Surface Use: Structures that are over 10 feet in height that create raptor perches would not be authorized or would require anti-perch devices within the 2 mile buffer of sharp-tailed grouse and greater prairie-chicken nesting areas.
Objective:	Reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed or greater prairie-chicken nesting habitat within 2 miles of a lek.

Wildlife: Management Action 6

Resource:	Sharp-Tailed Grouse and Greater Prairie-Chickens - Underground Utility (Power and Transmission) Lines
Stipulation:	Controlled Surface Use: Power lines must be buried, designed or sited in a manner which does not impact sharp-tailed grouse or greater prairie-chickens within a 2 mile buffer of nesting areas.
Objective:	Reduce hazards to grouse and greater prairie-chickens from power lines and reduce raptor predation of sharp-tailed grouse and greater prairie-chickens in nesting areas.
Exception:	None.
Modification:	None.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer contains sharp-tailed or greater prairie-chicken nesting habitat within 2 miles of a lek.

Wildlife: Management Action 7

Resource:	Big Game Winter Range
Stipulation:	Controlled Surface Use: Prior to surface occupancy and use a plan shall be prepared by the proponent as a component of the APD, Sundry Notice, etc. and approved by the authorized officer with confirmation from the state wildlife management agency. The operator shall not initiate surface-disturbing activities unless the authorized officer has approved the plan. The plan must demonstrate to the authorized officer's satisfaction the function and suitability of the habitat will not be impaired.
Objective:	Maintain big game habit and avoid or minimize habitat loss and disturbance.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area no longer contain crucial winter range for wildlife.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer contains crucial winter range for wildlife.

Wildlife: Management Action 9

- Resource: Raptor nest sites not defined as special status raptors that were active within the last 7 years
- Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of raptor nests sites active within the last 7 years.
- Objective: Limit nesting disturbance to raptors that are not identified as special status raptor species.
- Exception: An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification: The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ¼ mile of raptor nest sites active within the past 7 years.
- Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer is within ¼ mile of raptor nest sites active within the past 7 years.

Wildlife: Management Action 10

- Resource: Raptor nest sites that were active within the last 7 years
- Stipulation: Timing Limit: Surface use is prohibited within ½ mile of active raptor nest sites from March 1 through July 31.
- Objective: Limit nesting disturbance to raptors.
- Exception: An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification: The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ½ mile of raptor nest sites active within the past 7 years.
- Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer is within ½ mile of raptor nest sites active within the past 7 years.

Wildlife: Management Action 16

- Resource: Bighorn Sheep Range
- Stipulation: No Surface Occupancy: Surface occupancy and use would not be allowed in occupied or proposed bighorn sheep range.
- Objective: Limit disturbance to bighorn sheep.
- Exception: None.
- Modification: The boundaries of the stipulated area may be modified if the Authorized Officer (AO) determines that portions of the area no longer contain bighorn sheep habitat.
- Waiver: This stipulation may be waived if the AO determines that the entire leasehold no longer contains bighorn sheep habitat.

Wildlife: Management Action 20

Resource:	Colonial Nesting Water-Birds
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of waterbird nesting colonies.
Objective:	Limit disturbance to Colonial Nesting Water-Birds.
Exception:	None.
Modification:	The boundaries of the stipulated area may be modified if the Authorized Officer (AO) determines that portions of the area no longer contain colonial nesting water-birds.
Waiver:	This stipulation may be waived if the AO determines that the entire leasehold no longer contains colonial nesting water-birds.

Wildlife: Management Action 21

Resource:	Colonial Nesting Water-Birds
Stipulation:	Timing Limit: Surface disturbing and disruptive activities would be prohibited within ½ mile of waterbird nesting colonies from April 1 through July 15.
Objective:	Limit disturbance to colonial nesting water-birds.
Exception:	None.
Modification:	The boundaries of the stipulated area may be modified if the Authorized Officer (AO) determines that portions of the area no longer contain colonial nesting water-birds.
Waiver:	This stipulation may be waived if the AO determines that the entire leasehold no longer contains colonial nesting water-birds.

Special Status Species: Management Action 1

Resource:	Bald Eagle Nests
Stipulation:	No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of bald eagle nest sites active within the preceding 5 years.
Objective:	Limit disturbance to bald eagle nesting habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect bald eagles or their habitat. If the AO determines that the action can affect bald eagles or their habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area can be occupied without adversely affecting bald eagle nest sites or nesting habitat.
Waiver:	This stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold can be occupied without adversely affecting bald eagle nest sites or nesting habitat or the bald eagle is declared recovered and no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 4

Resource:	Peregrine Falcon Nests
Stipulation:	No Surface Occupancy: No surface occupancy or use within 1 mile of peregrine nesting sites active within the preceding 7 breeding seasons.
Objective:	Limit disturbance to peregrine falcon nesting habitat.
Exception:	An exception may be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the peregrine falcon or its habitat. If the AO determines that the action may or will have an adverse effect, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by the BLM in consultation with the USFWS.
Modification:	The boundaries of the stipulated area may be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer critical to the peregrine falcon.
Waiver:	The stipulation may be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat critical to the peregrine falcon or the peregrine falcon is declared recovered and no longer protected under the Endangered Species Act.

Special Status Raptors: Management Action 6

Resource:	Golden eagle, burrowing owl, ferruginous hawk, Swainson's hawk, osprey, prairie falcon, and northern goshawk. Does not include peregrine falcon or bald eagle.
Stipulation:	No Surface Occupancy: No surface occupancy or use within ¼ mile of special status raptor nests.
Objective:	Limit nesting disturbance to raptors that have been identified as special status raptor species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ¼ mile of raptor nest sites.
Waiver:	This stipulation can be waived if the AO determines that the entire leasehold no longer is within ¼ miles of raptor nest sites.

Special Status Raptors: Management Action 7

Resource:	Golden eagle, burrowing owl, ferruginous hawk, Swainson's hawk, osprey, prairie falcon, and northern goshawk. Does not include peregrine falcon or bald eagle.
Stipulation:	Timing Limit: Surface use is prohibited within ½ mile of active raptor nest sites from March 1 through July 31.
Objective:	Limit nesting disturbance to raptors that have been identified as special status raptor species.
Exception:	An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer within ½ mile of raptor nest sites.

Waiver: This stipulation can be waived if the AO determines that the entire leasehold no longer is within ½ miles of raptor nest sites.

Special Status Species: Management Action 11

Resource: Greater Sage-Grouse General Habitat Leks

Stipulation: No Surface Occupancy: No surface occupancy or use within 6/10 of a mile from leks.

Objective: Limit disturbance to sage-grouse nesting habitat.

Exception: The Authorized Officer may grant an exception only where the proposed action:

- (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
- (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG.

Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. (See further requirements in the WEMs preamble near the beginning of Appendix E.4.)

Modification: None.

Waiver: None.

Special Status Species: Management Action 14

Resource: Greater Sage-Grouse

Stipulation: No Surface Occupancy: Sage-grouse crucial winter range would be managed as a No Surface Occupancy for oil and gas development and exploration.

Objective: Within the sage-grouse General Habitat, maintain integrity of the habitat to support sustainable sage-grouse populations.

Exception: The Authorized Officer may grant an exception only where the proposed action:

- (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
- (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG.

Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. (See further requirements in the WEMs preamble near the beginning of Appendix E.4.)

Modification: None.

Waiver: None.

Special Status Species: Management Action 16

Resource: Greater Sage-Grouse General Habitat

- Stipulation:** Controlled Surface Use: Surface use prohibited within 2 miles of a lek. Surface disturbing and disruptive activities within 2 miles of a lek would be avoided unless the project proponent can clearly demonstrate that the impacts can be adequately mitigated and conservation actions or needed design features are included and the goals of this plan not compromised.
- Objective:** Within the Greater Sage-Grouse General Habitat, maintain integrity of the habitat, to support sustainable sage-grouse populations.
- Exception:** The Authorized Officer (AO) may grant an exception to specific requirements of this stipulation if the action, as proposed or conditioned would not compromise the habitat for sage-grouse and meet the goals for sage-grouse habitat.
- a) Surface disturbing/disruptive activities will prevent or minimize disturbance to Greater Sage-Grouse or their habitat. Except as identified above or during emergency situations, activities will not compromise the habitat.
 - b) Continuous noise (related to long-term operations and/or activities) would be no greater than 49 decibels at ¼ mile from the perimeter of the lek.
 - c) Temporary noise (related to installation, maintenance, one-time use, emergency operations, etc.) exceeding 49 decibels at ¼ mile from the perimeter of a lek or surface disturbing/ disruptive activities may be allowed, but only from 10 a.m. to 4 p.m. between March 15 and May 15.
 - d) Manage water developments to reduce the spread of West Nile virus within sage-grouse habitat areas.
 - e) Site and/or minimize linear ROW to reduce disturbance to sagebrush habitats.
 - f) Maximize placement of new utility developments (power lines, pipelines, etc.) and transportation routes in existing utility or transportation corridors.
 - g) Power lines would be buried, eliminated, designed or sited in a manner which does not impact sage-grouse.
 - h) Placement of other high profile structures, exceeding 10 feet in height, would be eliminated, designed or sited in a manner which does not impact sage-grouse.
 - i) Remote monitoring of production facilities must be utilized and all permit applications must contain a plan to reduce the frequency of vehicle use.
 - j) Maximize the area of interim reclamation on long-term access roads and well pads including reshaping, topsoiling and revegetating cut and fill slopes.
 - k) Restore disturbed areas at final reclamation to pre-disturbance conditions or desired plant community.
 - l) Permanent (longer than 2 months) structures which create movement must be designed or sited to minimize impacts to sage-grouse.
 - m) Consider use of off-site mitigation, (e.g., creation of sagebrush habitat, purchase conservation easements, or buying down grazing) with proponent dollars to offset habitat losses.
 - n) Consider creation of a "Mitigation Trust Account" when impacts cannot be avoided, minimized, or effectively mitigated through other means. If approved by the BLM, the proponent may contribute funding to maintain habitat function based on the estimated cost of habitat treatments or other mitigation needed to maintain the functions of impacted habitats. Off-site mitigation should only be considered when no feasible options are available to adequately mitigate within and immediately adjacent to the impacted site, or when the off-site location would provide more effective mitigation of the impact than can be achieved on-site.
- Modification:** The AO may modify the area subject to the stipulation if an environmental analysis finds a portion of the General Habitat Area is nonessential or no longer sage-grouse habitat.
- Waiver:** This stipulation may be waived by the AO if: 1) after consultation with the appropriate State Wildlife agency, it is determined significant portions of the General Habitat have been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored, or 2) sage-grouse are no longer a BLM Special Status Species and are not listed as threatened or endangered by the U.S. Fish and Wildlife Service, or 3) no reasonable alternative development scenario mitigating the impacts is possible.

Special Status Species: Management Action 18

Resource:	Greater Sage-Grouse General Habitat (GHMAs) - Underground Utility (Power and Transmission) Lines
Stipulation:	<p>Controlled Surface Use: All new utility and power lines that can be safely buried would be buried within 2 miles of sage-grouse leks and within sage-grouse winter range.</p> <p>When burial of power lines is not possible, above ground lines will be located and designed to minimize impacts of predation, collision and other associated stressors to sage-grouse.</p> <p>Existing overhead lines within 2 miles of leks and within sage-grouse winter range would be evaluated for threats to sage-grouse and if necessary, modified to reduce the threat. If modification would not likely be effective, the overhead line may be relocated. Any requirements for modification or relocation of existing overhead lines would be subject to valid existing rights.</p>
Objective:	Reduce collision hazards to sage-grouse from power lines and reduce raptor predation on sage-grouse within Greater Sage-Grouse General Habitat (GHMAs).
Exception:	None.
Modification:	None.
Waiver:	This stipulation may be waived, if after consultation with the appropriate State and federal wildlife agencies, it is determined that significant portions of the Greater Sage-Grouse General Habitat has been altered to the point sage-grouse no longer occupy the site and there is no reasonable likelihood of functional habitat being restored.

Special Status Species: Management Action 22

Resource:	Greater Sage-Grouse Priority Habitat Management Areas (PHMAs)
Stipulation:	No Surface Occupancy: Greater Sage-Grouse PHMAs would be managed as No Surface Occupancy and Use (127,735 surface and 412,822 oil and gas subsurface minerals acres.) These areas would be open to oil and gas leasing with a no surface occupancy stipulation. All sage-grouse habitat that is not part of a PHMA would be managed as General Habitat as noted in Map 2-5
Objective:	Within Greater Sage-Grouse PHMAs maximize the integrity of the habitat, strive to maintain or improve sage-grouse populations, and at a minimum sage-grouse habitat so populations in the Greater Sage- Grouse PHMAs reflect population trends exhibited by representative sage-grouse trend data from SDGFP lek data (protection priority area controlled surface use).
Exception:	<p>The Authorized Officer may grant an exception only where the proposed action:</p> <ul style="list-style-type: none"> (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or, (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG. <p>Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. (See further requirements in the WEMs preamble near the beginning of Appendix E.4.)</p>
Modification:	None
Waiver:	None

Special Status Species: Management Action 29

Resource:	Greater Sage-Grouse Winter Range in Priority Habitat Management Areas (PHMAs)
Stipulation:	No Surface Occupancy: Sage-grouse crucial winter range would be managed as a No Surface Occupancy for oil and gas development and exploration. See sagebrush cover Map 2-6.
Objective:	Within Greater Sage-Grouse PHMAs maximize the integrity of the habitat, strive to maintain or improve sage-grouse populations, and at a minimum sage-grouse habitat so populations in the Greater Sage- Grouse PHMAs reflect population trends exhibited by representative sage-grouse trend data from SDGFP lek data (protection priority area controlled surface use).
Exception:	<p>The Authorized Officer may grant an exception only where the proposed action:</p> <ul style="list-style-type: none"> (i) Would not have direct, indirect, or cumulative effects on GRSG or its habitat; or, (ii) Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG. <p>Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid Federal fluid mineral lease existing as of the date of this RMP. (See further requirements in the WEMs preamble near the beginning of Appendix E.4.)</p>
Modification:	None.
Waiver:	None.

Special Status Species: Management Action 34

Resource:	Piping Plover Habitat
Stipulation:	No Surface Occupancy: Surface disturbing and disruptive activities are prohibited within ¼ mile of piping plover habitat.
Objective:	Protection of piping plover habitat.
Exception:	An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the piping plover or its habitat. If the AO determines that the action can affect the piping plover or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
Modification:	The boundaries of the stipulated area may be modified if the AO, in consultation with USFWS, determines that portions of the area are no longer essential to the piping plover.
Waiver:	The stipulation can be waived if the AO, in consultation with USFWS, determines that the entire leasehold no longer contains habitat essential to the piping plover or the piping plover is declared recovered and is no longer protected under the Endangered Species Act of 1973.

Special Status Species: Management Action 36

Resource:	Interior Least Tern Habitat
Stipulation:	No Surface Occupancy: Surface disturbing and disruptive activities are prohibited within ¼ mile of interior least tern habitat.
Objective:	Protection of interior least tern habitat.

- Exception:** An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the least tern or its habitat. If the AO determines that the action can affect the least tern or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
- Modification:** The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer essential to the least tern.
- Waiver:** The stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the least tern or the least tern is declared recovered and no longer protected under the Endangered Species Act.

Special Status Species: Management Action 38

- Resource:** Sprague's Pipit Habitat
- Stipulation:** A lease notice would be attached to all leases in documented or potential habitat* for Sprague's pipit. The lease notice would notify the lease holder that mitigation and conservation actions may be required including a limit on exploration and development from April 15 to July 15.

*Currently habitat is present but not well identified in western South Dakota.

- Objective:** Protection of Sprague's pipit habitat.
- Exception:** N/A
- Modification:** N/A
- Waiver:** N/A

Special Status Species: Management Action 43

- Resource:** Prairie Dogs
- Stipulation:** Controlled Surface Use: Oil and gas leasing would be open and surface occupancy and use on prairie dog colonies would be allowed provided adequate mitigation and conservation actions are implemented to maintain the functionality of the prairie dog habitat.
- Objective:** Protection of prairie dog habitat.
- Exception:** An exception can be granted by the AO if the operator submits a plan that demonstrates that the proposed action will not affect the prairie dog or its habitat. If the AO determines that the action can affect the prairie dog or its habitat and has the potential to subsequently affect the black-footed ferret, consultation with the USFWS will be required prior to final determination on the exception.
- Modification:** The boundaries of the stipulated area can be modified if the AO determines that portions of the area are no longer essential to the prairie dog.
- Waiver:** The stipulation can be waived if the AO determines that the entire leasehold no longer contains habitat essential to the prairie dog or the prairie dog is no longer considered a BLM sensitive species.

Special Status Species: Management Action 46

- Resource:** Black-footed Ferret
- Stipulation:** No Surface Occupancy: Surface occupancy and use would be prohibited within ¼ mile of occupied black-footed ferret habitat.

- Objective:** Protection of Black Footed Ferret habitat.
- Exception:** An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the black-footed ferret or its habitat. If the AO determines that the action can affect the black-footed ferret or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
- Modification:** The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer essential to the black-footed ferret.
- Waiver:** The stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the black-footed ferret or the black-footed ferret is declared recovered and no longer protected under the Endangered Species Act.

Special Status Species: Management Action 49

- Resource:** Pallid and Shovel-Nosed Sturgeon
- Stipulation:** No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of the water's edge of the Missouri River to protect pallid and shovel-nosed sturgeon.
- Objective:** Protection of Pallid and Shovel-Nosed Sturgeon.
- Exception:** An exception can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that the proposed action will not affect the pallid and shovel-nosed sturgeon or its habitat. If the AO determines that the action can affect the pallid and shovel-nosed sturgeon or its habitat, consultation with the USFWS will be required prior to final determination on the exception.
- Modification:** The boundaries of the stipulated area can be modified if the AO, in consultation with the USFWS, determines that portions of the area are no longer essential to the pallid and shovel-nosed sturgeon.
- Waiver:** The stipulation can be waived if the AO, in consultation with the USFWS, determines that the entire leasehold no longer contains habitat essential to the pallid and shovel-nosed sturgeon or the pallid and shovel-nosed sturgeon is declared recovered and no longer protected under the Endangered Species Act.

Fisheries and Aquatics: Management Action 4

- Resource:** Fisheries and Aquatics
- Stipulation:** No Surface Occupancy: Surface occupancy and use is prohibited within ¼ mile of designated reservoirs with fisheries.
- Objective:** Protection of fisheries and aquatics species.
- Exception:** An exception to this stipulation can be granted by the Authorized Officer (AO) if the operator submits a plan that demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.
- Modification:** The boundaries of the stipulated area can be modified if the AO determines that portions of the area can be occupied without adversely affecting the fisheries and recreational values of the reservoir.
- Waiver:** This stipulation can be waived if the AO determines that the entire leasehold is no longer a fishery, and it can be occupied without adversely affecting the recreational values of the reservoir.

Visual Resources Management (VRM): Management Action 2

Resource:	Visual Resources
Stipulation:	Controlled Surface Use: Semi-permanent or permanent facilities that are not specifically prohibited in VRM Class II areas may require special design including location, size, and camouflage painting to blend with the natural surroundings and meet the visual quality objectives for the area (applies to all activities; CSU for oil and gas). Surface-disturbing activities in VRM Class III and IV may also require designs to reduce VRM impacts (applies to all activities; lease notice for oil and gas).
Objective:	Protection of the aesthetic and scenic qualities of the landscape.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.
Modification:	None.
Waiver:	None.

Visual Resources Management (VRM): Management Action 3

Resource:	Visual Resources
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited in and within ½ mile of buffer of the Exemption Area SRMA. Surface occupancy and use would be prohibited within ½ mile buffer around the Fort Meade SRMA/ACEC. (Minerals would be withdrawn within the Fort Meade SRMA/ACEC.)
Objective:	Protection of the aesthetic and scenic qualities of the landscape within ½ mile of designated Special Recreation Management Areas.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.
Modification:	None.
Waiver:	None.

Recreation: Management Action 12

Resource:	Recreation
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within ½ mile of the Special Recreational Management Areas (SRMAs) including Fort Meade ACEC and Exemption Area.
Objective:	Protection of ACEC and recreational values associated with SRMAs.
Exception:	The Authorized Officer (AO) may allow temporary projects to exceed VRM standards in Class II-IV areas if the project will terminate within two years of initiation. Rehabilitation will begin at the end of the two-year period. During the temporary project, the AO may require phased mitigation to better conform to the prescribed VRM.

Modification: None.

Waiver: None.

Lands and Realty, ROW Authorizations: Management Action 2

Resource: Visual Resources and Wildlife

Stipulation: Controlled Surface Use: All fiber optic, telephone and power lines that can be safely buried would be buried or sited to have least impact on resources. All other utility lines would be evaluated at the project level.

Objective: Protection of visual and scenic qualities while allowing for flexibility to avoid cultural or mitigate impacts to cultural sites.

Exception: Areas where damage to cultural resources cannot be mitigated may be excepted by the Authorized Officer (AO).

Modification: None.

Waiver: None.

Public Safety: Management Action 1

Resource: Public Safety – Abandoned Minuteman Missile Sites

Stipulation: Controlled Surface Use: Surface-disturbing activity at U.S. Air Force abandoned Minuteman missile sites would be restricted on the sites and approximately 1/8 mile (approximately 200 meters) beyond the sites.. Subsurface activity would be prohibited under the sites and approximately 1/8 mile (approximately 200 meters) beyond the sites.

Objective: Protect the public and environment from movement of or contamination by potential residual hazardous waste.

Exception: This stipulation can be excepted by the Authorized Officer (AO) if it is determined that the disturbance would not intercept and contribute to the spreading of potential residual wastes by a plan that addresses the design of the proposal, stockpiling and respreading of soil materials, and sampling and testing.

Modification: None.

Waiver: None.

Cultural Resources: Management Action Common to All Alternatives

Resource: Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Objective: To protect significant historic properties and cultural resources.

Exception: None.

Modification: None.

Waiver: None.

Cultural Resources: Management Action Common to All Alternatives

Resource: Cultural Resource Survey

Stipulation: An inventory of those portions of the leased lands subject to proposed disturbance may be required prior to any surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. The lessee or operator shall engage the services of a cultural resource consultant acceptable to the Surface Management Agency (SMA) to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard minimum to cover possible site relocation which may result from environmental or other considerations. Requirements for inventory methods including the size of standard APD survey areas would be followed as described in *Inventory Requirements for Proposed Well Sites, APD's - Well Pad/Block Inventory* in IM MT2015-043, or subsequent updates to this IM. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.
2. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.

Objective: Compliance with Section 106 of the National Historic Preservation Act is required for all actions which may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

Exception: None.

Modification: None.

Waiver: None.

Cultural Resources: Management Action 3(a)

Resource: National Register of Historic Places (NRHP) Eligible Properties/Districts – No Surface Occupancy

Stipulation: Occupancy and use is prohibited within, and for a distance of 300 feet from the boundaries of cultural properties and archaeological/historic districts determined to be eligible or potentially eligible for the National Register of Historic Places, except for the Fort Meade Recreation Area National Historic District, Black Hills Army Depot (BHAD) National Register Historic District Site, and the Bear Butte National Historic Landmark, which are closed to oil and gas leasing.

Objective:	To protect significant cultural properties and archaeological districts and their settings, and to avoid disturbance or inadvertent impacts to these resources.
Exception:	An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impact to cultural properties eligible or potentially eligible for the National Register of Historic Places can be mitigated through data recovery, extensive recordation, or other acceptable means. Where impacts to cultural resources cannot be mitigated to the satisfaction of the Surface Managing Agency and/or BLM, surface occupancy of that area must be prohibited.
Modification:	The boundaries of the stipulated area may be modified if the AO determines that portions of the designated site or district can be occupied without adversely affecting the cultural resource values for which the site or area was designated eligible.
Waiver:	None.

NOTE: Compliance with Section 106 of NHPA is required for all actions that can affect cultural properties eligible for the National Register of Historic Places (NRHP).

Cultural Resources: Management Action 3(b)

Resource:	Traditional Cultural Properties – No Surface Occupancy
Stipulation:	Occupancy and Use is prohibited within, and for a distance of ½ mile from the boundaries of cultural properties determined to be of importance to Native American Tribal groups, sites determined to be Traditional Cultural Properties, and/or designated for traditional use. Such properties include (but are not limited to) burial locations, pictograph/petroglyph, vision quest locations, certain stone alignments, buttes or other uplift type landforms, plant gathering locations, and areas considered sacred or used for religious purposes.
Objective:	To avoid disturbance and to protect archaeological properties of known significance to Native American groups, as well as, traditional cultural properties and the setting in which they occur.
Exception:	An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that operations will be designed and/or located in such a manner as to have a minimal impact to the natural setting and characteristics of the immediate area and that adverse impacts to these traditional cultural properties can be mitigated in consultation with, and to the satisfaction of, affected Indian Tribes or Native American groups.
Modification:	None.
Waiver:	None.

Cultural Resources: Management Action 4

Resource:	Cultural Resources and Public Safety
Stipulation:	No Surface Occupancy: Surface occupancy and use would be prohibited within the Igloo town site and the Black Hills Army Depot (BHAD) National Register Historic District Site is closed to leasing.
Objective:	Protect significant historic properties and resources and prevent the movement of, or contamination by, potential hazardous materials within the abandoned Igloo town site and the Black Hills Army Ordinance Depot.
Exception:	None.

Modification: None.

Waiver: None.

Cultural Resources: Management Action 5

Resource: National Historic Trails

Stipulation: No Surface Occupancy: Surface occupancy and use is prohibited within ½ mile of the National Trail Management Corridor of designated National Historic Trails. Designated National Historic Trails include the Lewis and Clark Trail. The River Corridor is the designated historic trail for the Lewis and Clark Trail. To protect the Lewis and Clark Trail and associated settings, this stipulation would be applied to the water portion of the Missouri River and its reservoirs and extend out ½ mile from the high water mark of the River its reservoirs.

Objective: To protect the nature and purpose; trail resources, qualities, values, and associated settings; and primary use or uses of the historic trail, in accordance with National Trail System Act.

Exception: An exception to this stipulation may be granted by the AO if the lessee or project proponent completes a comprehensive trail inventory, as outlined in Manual 6280, and presents a proposal which demonstrates resource values are not affected or that adverse impacts can be adequately mitigated to prevent impact to:

- The nature and purposes of the National Trail.
- National Trail resources, qualities, values, and associated settings.
- National Trail primary use or uses.
- The National Trail from the cumulative or trail-wide perspective.

Modification: None

Waiver: None

Paleontological Resources: Management Action Common to All Alternatives

Resource: Paleontological Resources – No Surface Occupancy

Stipulation: Surface occupancy and use is prohibited within designated paleontological sites/localities and in significant paleontological sites regardless of designation, except in the Fossil Cycad ACEC, which is closed to leasing.

Objective: Preserve and protect significant vertebrate fossils and paleontological resources.

Exception: An exception to this stipulation may be granted by the Authorized Officer (AO) if the lessee or operator submits a plan which demonstrates that the adverse impacts to significant paleontological resources can be mitigated through recovery and extensive recordation. Where impacts to paleontological resources cannot be mitigated to the satisfaction of the Surface Management Agency, surface occupancy on that area must be prohibited.

Modification: The boundaries of the stipulated area may be modified if the AO determines that portions of the designated paleontological site/locality can be occupied without adversely affecting the resource values or significance.

Waiver: None.

Paleontological Resources: Management Action 1

Resource: Paleontological Resource Inventory – Controlled Surface Use

Stipulation: In areas known to have a high potential (Classes 3, 4 and 5) for containing significant paleontological

resources, the Lessee shall be required to conduct a paleontological inventory prior to any surface disturbance. The lessee must engage the services of a qualified paleontologist, acceptable to the Surface Management Agency, to conduct the inventory. An acceptable inventory report is to be submitted to the BLM for review and approval at the time a surface-disturbing plan of operations is submitted.

- Objective: Preserve and protect scientifically significant vertebrate fossils and paleontological locales.
- Exception: An exception may be granted if the area has already been inventoried for paleontological resources.
- Modification: None.
- Waiver: None.

Appendix E.5

Lease Notices

Endangered Species Act Standard Lease Notice
Migratory Bird Treaty Act Standard Lease Notice
Sprague's Pipit Lease Notice
Setback from Human Occupied Residences Requirement

Common lease notices and stipulations are shown in Appendix E.5 through E.7. For a more detailed list refer to http://www.blm.gov/mt/st/en/prog/energy/oil_and_gas/leasing/stipulations.htm.

Endangered Species Act Section 7 Consultation Stipulation

This Lease Stipulation applies to all Alternatives

O&G – Lease Notice

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or requirements of the Endangered Species Act as amended, 16 U.S.C. § et seq., including completion of any required procedure for conference or consultation.

Migratory Bird Treaty Act Lease Notice

This Lease Notice applies to all Alternatives

O&G – Lease Notice

Migratory Bird Treaty Act. The Operator is responsible for compliance with provisions of the Act by implementing one of the following measures; a) avoidance by timing; ground disturbing activities will not occur from April 15 to July 15, b) habitat manipulation; render proposed project footprints unsuitable for nesting prior to the arrival of migratory birds (blading or pre-clearing of vegetation must occur prior to April 15 within the year and area scheduled for activities between April 15 and July 15 of that year to deter nesting, or c) survey-buffer-monitor; surveys will be conducted by a BLM approved biologist within the area of the proposed action and a 300 foot buffer from the proposed project footprint between April 15 to July 15 if activities are proposed within this timeframe. If nesting birds are found, activities would not be allowed within 0.1 miles of nests until after the birds have fledged. If active nests are not found, construction activities must occur within 7 days of the survey. If this does not occur, new surveys must be conducted. Survey reports will be submitted to the appropriate BLM Office.

Sprague's Pipit Lease Notice**This Lease Notice applies to all Alternatives****O&G – Lease Notice**

The lease area may contain habitat for the federal candidate Sprague's pipit. The operator may be required to implement specific measures to reduce impacts of oil and gas operations on Sprague's pipits, their habitat and overall population. Such measures would be developed during the application for permit to drill and environmental review processes, consistent with lease rights. Measures may include limits on exploration and development activities from April 15 to July 15.

If the U.S. Fish and Wildlife Service lists the Sprague's pipit as threatened or endangered under the Endangered Species Act, the BLM would enter into formal consultation on proposed permits that may affect the Sprague's pipit and its habitat. Restrictions, modifications, or denial of permits could result from the consultation process.

Setback from Human Occupied Residences Requirement**This Lease Notice applies to all Alternatives****O&G – Lease Notice**

The lease area may contain human occupied residences. Under Regulation 43 CFR 3101.1-2 and terms of the lease (BLM Form 3100-11), the authorized officer may require reasonable measures to minimize adverse impacts to other resource values, land uses, and users not addressed in lease stipulations at the time operations are proposed. Such reasonable measures may include, but are not limited to, modification of siting or design of facilities, which may require relocating proposed operations up to 200 meters, but not off the leasehold.

The setback requirement of 500 feet from human occupied residences has been established based upon the best information available. The following condition of approval may be applied as a result of the Application for Permit to Drill (APD) process during the on-site inspection and the environmental review unless an acceptable plan for mitigation of impacts is reached between the resident, lessee and BLM:

- **Facilities will not be allowed within 500 feet of human occupied residences.**

The intent of this Lease Notice is to provide information to the lessee that would help design and locate oil and gas facilities to preserve the aesthetic qualities around human occupied residences.

Appendix E.6

Cultural Resources, Tribal Consultation and Paleontological Resources Standard Lease Stipulations

Cultural Resources 16-1

This Lease Stipulation applies to all Alternatives

This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations (e.g., State Historic Preservation Officer (SHPO) and tribal consultation) under applicable requirements of the NHPA and other authorities. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Stipulation for Cultural Resource Protection

This Lease Stipulation applies to all Alternatives

The lease holder is not allowed to collect or give others permission to collect historic or prehistoric artifacts on Public Lands. An artifact is any human-made object or object used in its natural state by humans, which is at least 50 years old. The unauthorized collecting of prehistoric and historic artifacts on public lands is punishable under Federal law. If you observe individuals collecting artifacts, immediately notify the authorized BLM official.

Paleontological Resource Inventory Requirement

Common lease notices and stipulations are shown. For a more detailed list refer to http://www.blm.gov/mt/st/en/prog/energy/oil_and_gas/leasing/stipulations.htm.

LEASE NOTICE 14-12

This Lease Notice applies to all Alternatives

PALEONTOLOGICAL RESOURCE INVENTORY REQUIREMENT

This lease has been identified as being located within geologic units rated as being moderate to very high potential for containing significant paleontological resources. The locations meet the criteria for Classes 3, 4 and/or 5 as set forth in the Potential Fossil Yield Classification System, WO IM 2008-009, Attachment 2-2. The BLM is responsible for assuring that the leased lands are examined to determine if paleontological resources are present and to specify mitigation measures. Guidance for application of this requirement can be found in WO IM 2008-009 dated October 15, 2007, and WO IM 2009-011 dated October 10, 2008.

Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or project proponent shall contact the BLM to determine if a paleontological resource inventory is required. If an inventory is required, the lessee or project proponent will complete the inventory subject to the following:

- the project proponent must engage the services of a qualified paleontologist, acceptable to the BLM, to conduct the inventory.
- the project proponent will, at a minimum, inventory a 10-acre area or larger to incorporate possible project relocation which may result from environmental or other resource considerations.
- the paleontological inventory may identify resources that may require mitigation to the satisfaction of the BLM as directed by WO IM 2009-011.

Appendix E.7

Air Resources Lease Notices

Air Resources

This Lease Stipulation applies to All Alternatives.

The lessee/operator is given notice that prior to project-specific approval, additional air resource analyses may be required in order to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include equipment and operations information, emission inventory development, dispersion modeling or photochemical grid modeling for air quality and/or air quality related value (AQRV) impact analysis, and/or emission control determinations. These analyses may result in the imposition of additional project-specific control measures to protect air resources.

Air Resources

This Lease Stipulation applies to Alternatives A, B and C.

Tier 4 engines would be required as follows: Diesel-fueled nonroad engine with greater than 200 horsepower (hp) design rating to be used during drilling or completion activities meets one of the following two criteria: (1) the engine was manufactured to meet EPA nitrogen oxides (NO_x) emission standards for Tier 4 nonroad diesel engines, or (2) the engine emits NO_x at rates less than or equal to EPA emission standards for Tier 4 nonroad diesel engines.

Tier 4 nonroad diesel engines, or the engine emits NO_x at rates less than or equal to EPA emission standards for Tier 4 nonroad diesel engines. (refer to Appendix E-7)

Objective: For the purpose of: Protecting air resources and ensuring compliance with the 1-hour nitrogen dioxide (NO₂) National Ambient Air Quality Standard (NAAQS).

Exception: N/A

Modification: N/A

Waiver: N/A

Refer to Table 2-6 Oil and Gas section for the CSU that applies to Alternative D (Proposed Action).

Appendix E.8

Offer to Lease and Lease for Oil and Gas - Form 3100-11

BLM Form 3100-11, Offer to Lease and Lease for Oil and Gas, is available by request from BLM, or at the following website:

<http://www.blm.gov/style/medialib/blm/noc/business/eforms.Par.71287.File.dat/3100-011.pdf>

Appendix E.9

Oil and Gas Supplementary Information

Procedures In Oil and Gas Recovery and Operations (BLM)

Geophysical Operations

Oil and gas reservoirs are discovered by either direct or indirect exploration methods. Direct methods include mapping of surface geology, observing oil or gas seeps, and gathering information on hydrocarbon shows observed in drilling wells. Indirect methods include various types of geophysical exploration such as seismic, gravity, and magnetic surveys, which use remote data gathering techniques to delineate subsurface structures or lithologic changes that are not directly observable, but that may contain or trap oil and gas. Data is often acquired using equipment mounted on surface vehicles or aircraft. Information from geophysical exploration can lead oil companies or others to request that lands be offered for lease, or assist in the selection of drill sites on existing leases. However, a federal oil and gas lease is not required in order to conduct geophysical operations. Existing road systems are used where available. Roads may be cleared of vegetation and loose rocks to improve access for trucks if the permit allows that action.

Blading and road construction for seismic operations are not usually allowed so that environmental impacts are minimized. In areas with rugged terrain or without access roads, and during certain seasons of the year, seismic work is conducted by helicopter rather than by ground vehicles. Other geophysical operations that do not cause additional surface disturbance include remote sensing, and gravity, and aeromagnetic surveying.

Geophysical Permitting Procedures and Regulations

Geophysical operations on and off an oil and gas lease are reviewed by the Federal Surface Management Agency (SMA), which can include the BLM, Bureau of Reclamation (BOR), Corps of Engineers (COE), U.S. Forest Service (USFS), among others. Close cooperation between the operator and the managing agency during geophysical operations minimizes surface impacts and protects other resources.

Notification Process

Geophysical operations on public lands are reviewed by the BLM. Geophysical exploration on public lands requires review and approval following the procedures in 43 CFR Subparts 3150, 3151, and 3154. In the South Dakota Field Office (SDFO), the Field Manager is authorized to approve geophysical operations. The responsibilities of the geophysical operator and the Field Manager during geophysical operations are described below.

Geophysical Operator

The operator is required to file a Notice of Intent to Conduct Oil and Gas Exploration Operations (form 3150-4) for operations on public lands administered by the BLM. Maps (preferably 1:24,000 scale topographic maps) showing the location of the proposed lines, access routes and ancillary facilities must accompany the Notice of Intent. When the Notice of Intent is filed, the authorized officer may request a prework conference or field inspection. Special requirements or procedures that are identified by the authorized officer are included in the Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration (form 3150-4 and a copy of the state requirements). Any changes in the original Notice of Intent must be submitted in writing to the authorized officer. Written approval must be secured before activities proceed.

Bonding of the operator is required. A copy of proof of satisfactory bonding shall accompany the Notice of Intent. Proper bonding may include a \$5,000 individual, \$25,000 statewide, or \$50,000 nationwide geophysical exploration bond. In lieu of an exploration bond, a statewide or nationwide oil and gas bond may be used if it contains a rider for geophysical exploration. The operator is required to comply with applicable federal, state, and local laws such as Federal Land Policy and Management Act of 1976, the National Historic Preservation Act of 1966, and the Endangered Species

Act of 1973, as amended. Earth-moving equipment shall not be used without prior approval. Operators may be required to submit an archeological evaluation and the agency provide NEPA documentation for cultural and wildlife resources if

dirt work or other surface disturbance is contemplated, or if there is reason to believe that these resources may be adversely affected. When geophysical operations have been completed including any required reclamation or rehabilitation, the operator is required to file a Notice of Completion (form 3150-5) including certification that all terms and conditions of the approved Notice of Intent have been fulfilled. The operator must also submit a map that shows the actual line location, access route, and other survey details.

BLM Field Manager (authorized officer)

The authorized officer is required to contact the operator within five working days after receiving the Notice of Intent to explain the terms of the notice, including the “Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration,” current laws, and BLM administrative requirements. At the time of the prework conference or field inspection, written instructions or orders are given to the operator. The authorized officer is responsible for the examination of resource values to determine appropriate surface protection and reclamation measures. Compliance inspections during the operation ensure that stipulations are followed. The authorized officer is required to make a final inspection following filing of the Notice of Completion. Compliance inspections upon completion of work ensure that required reclamation is properly completed. When reclamation is approved, obligation against the operator’s bond is released. The BLM has 30 days after receipt of the Notice of Completion to notify the operator whether the reclamation is satisfactory or if additional reclamation work is needed. Bonding liability will automatically terminate within 90 days after receipt of the Notice of Completion unless the authorized officer notifies the operator of the need for additional reclamation work.

State Standards

Geophysical operations are administered by the Department of Environment and Natural Resources. An exploration permit is not needed for activities which cause very little or no surface disturbance, such as exploration using: nonexplosive seismic energy sources, airborne surveys and photographs, and the use of instruments or devices which are hand carried or otherwise transported over the surface to make magnetic, radioactive, or other tests and measurements. A permit is required by the state for seismic energy sources using explosives, but not for vibroseis trucks.

For exploration on state owned lands, the South Dakota Department of School and Public Lands would have separate requirements which only apply to those lands.

Mitigation

When a geophysical Notice of Intent is received, restrictions may be placed on the application to protect resource values or to mitigate impacts. Many of these requirements may be the same as the oil and gas lease stipulations adopted in the RMP. Other less restrictive measures may be used when impacts to resource values will be less severe. This is due in part to the temporary nature of geophysical exploration. Seasonal restrictions may be imposed to reduce conflicts with wildlife, watershed damage, and hunting activity. The decisions concerning the level of protection required are made on a case-by-case basis when a Notice of Intent is received.

Leasing Process

Federal oil and gas leasing authority is found in the 1920 Mineral Leasing Act, as amended, for public lands and the 1947 Acquired Lands Leasing Act, as amended, for acquired lands. Leasing of federal oil and gas is affected by other acts such as National Environmental Policy Act of 1969, the Wilderness Act of 1964, National Historic Preservation Act of 1966, the Endangered Species Act of 1973, Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. Regulations governing federal oil and gas leasing are contained in 43 CFR Part 3100 with additional requirements and clarification found in Onshore Operating Orders and Washington office manuals, handbooks and instruction memorandums.

The 1920 *Mineral Leasing Act* provides that all public lands are open to oil and gas leasing unless a specific order has been issued to close an area. Leasing procedures for oil, conventional gas, and coal bed natural gas are the same.

The lease grants the right to explore, extract, remove, and dispose of oil and gas deposits that may be found in the leased lands. The lessee may exercise the rights conveyed by the lease subject to the lease terms and attached stipulations, if any.

Lease rights may be subject to lease stipulations and permit approval requirements. Stipulations and permit requirements describe how lease rights are modified. Lease constraints or requirements may also be applied to applications for permit

to drill on existing leases provided the constraints or requirements are within the authority reserved by the terms and conditions of the lease. The stipulations and conditions of approval must be in accordance with laws, regulations, and lease terms. The lease stipulations and permit conditions of approval allow for management of federal oil and gas resources in concert with other resources and land uses. The BLM planning process is the mechanism used to evaluate and determine where and how federal oil and gas resources will be made available for leasing. In areas where oil and gas development may conflict with other resources, the areas may be closed to leasing. Areas where oil and gas development could coexist with other land uses or resources will be open to leasing. Leases in these areas will be issued with standard lease terms or with added stipulations based upon decisions in the land use document. Added stipulations are a part of the lease only when environmental and planning records demonstrate the necessity for the stipulations (modifications of the lease).

Currently, leases are issued as either competitive leases or noncompetitive leases with 10-year terms. Competitive leases will be sold to the highest qualified bidder at oral auctions that are held at least quarterly. Tracts that receive no bid at the sale are available for the filing of noncompetitive offers for two years following the sale. All offers filed the day after the sale (referred to as day-after-the-sale filings) are considered simultaneously filed. This means that if there is more than one offer filed for a specific parcel the day after the sale, a drawing must be held to determine the priority on multiple offers. Noncompetitive offers filed after that time are on a first-come first-served basis. If there are no offers filed for a parcel for the two-year period after the sale, the lands must be nominated again for competitive leasing. Rental payments for these leases will be \$1.50 per acre for the first 5 years and \$2.00 per acre thereafter until production is established. If the lessee establishes hydrocarbon production, the leases can be held for as long as oil or gas is produced. The royalty rate for leases issued following the 1987 Oil and Gas Leasing Reform Act is 12-1/2 percent one-half of which is returned to the State of South Dakota on public domain lands (not acquired lands). Minimum royalty is the same amount as the rental. Future interest leases are available for entire or fractional mineral estates that have not reverted to federal ownership. These are minerals that are reserved by the grantor for a specific period of time in warranty deeds to the United States. Any future interest leases may be obtained only through the competitive bidding process and are made effective the date of vesting of the minerals with the United States.

Consultation with tribes is sometimes required during the leasing and the permit to drill processes. This depends on concerns expressed by tribes in relation to Native American traditional and religious values and practices. Refer to the cultural resources section (2.1.14) in Chapter Two of the AMS for further discussion of this topic.

Lease Form

Oil and gas leases are issued on Form 3100-11, Offer to Lease and Lease for Oil and Gas (Appendix E.6). Stipulations are attached to this form when resources have been identified for protection or mitigation (Forms MT-3109-2 through 4).

Special Stipulations for Other Surface

- **Management Agencies:** Lands leased for the Bureau of Reclamation, Corps of Engineers, the Department of the Air Force, or other agencies will use special stipulation forms to identify operating requirements on Lands under their jurisdiction. (See Appendices E.4 and E.5)

Resource Management Plan Maintenance

New information may lead to changes in existing resource inventories. New use areas and resource locations may be identified or use areas and resource locations that are no longer valid may be identified. These resources usually cover small areas requiring the same protection or mitigation as identified in this plan. Identification of new areas or removal of old areas that no longer have those resource values will result in the use of the same lease stipulation identified in this plan. These areas will be added to the existing data inventory without a plan amendment. In cases where the changes constitute a change in resource allocation outside the scope of this plan, a plan amendment would be required.

Lease Stipulations

Certain resources in the planning area require protection from impacts associated with oil and gas activities. The specific resource and the method of protection are contained in lease stipulations. Lease stipulations are usually no surface occupancy, controlled surface use, or timing limitation. A notice may also be included with a lease to provide guidance regarding resources or land uses. While the actual wording of the stipulations may be adjusted at the time of leasing, the protection standards described will be maintained.

Controlled Surface Use

Use or occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. Controlled surface use is used for operating guidance, not as a substitute for the no surface occupancy or timing stipulations.

No Surface Occupancy (NSO)

Use or occupancy of the land surface for fluid mineral exploration or development is prohibited in order to protect identified resource values. The no surface occupancy stipulation includes stipulations which may have been worded as No Surface Use and Occupancy,” “No Surface Disturbance,” “Conditional No Surface Occupancy,” and “Surface Disturbance or Occupancy Restriction (by location).”

Timing Limitation (Seasonal Restriction)

Prohibits surface use during specified times to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be insufficient.

Waivers, Exceptions, Modifications

Lessees must honor lease stipulations when an Application for Permit to Drill or other surface disturbing operations are proposed to explore and develop a lease, unless the BLM grants a waiver, exception, or modification to a lease stipulation. This RMP establishes the guidelines by which future waivers, exceptions, or modifications are granted within the SDFO. Substantial modification or waiver is subsequent to lease issuance is subject to public review for at least a 30-day period.

Exception: A case-by case exemption from a lease stipulation. The stipulation continues to apply to all other sites within the leasehold to which the restrictive criteria apply.

Modification: Fundamental changes to the provisions of a lease stipulation, either temporarily or for the term of the lease. Therefore, a modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria apply.

Waiver: Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

Sage Grouse

Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMA and GHMA. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMA and GHMA, and subject to applicable stipulations for the conservation of Greater Sage-Grouse, priority will be given to development in non-habitat areas first and then in the least suitable habitat for Greater Sage-Grouse. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 U.S.C. 226(p) and 43 C.F.R. 3162.3-1(h).

Permitting

A federal lessee or operator is governed by procedures set forth in the Code of Federal Regulations at 43 CFR Part 3160, Onshore Oil and Gas Order No. 1, “Approval of Operations on Onshore Federal and Indian Oil and Gas Leases,” issued under 43 Code of Federal Regulations (CFR) 3164 and other orders and notices.

The lessee may conduct lease operations after lease issuance. However, proposed drilling and associated activities must be approved in advance before beginning operations. Therefore, before beginning construction or the drilling of a well, the lessee or operator must file an Application for Permit to Drill (APD) with the BLM North Dakota Field Office (NDFO). A copy of the application will be posted in the NDFO and South Dakota Field Office (SDFO) for a minimum of 30 days for review by the public. After 30 days, the application can be approved in accordance with (a) lease stipulations, (b) Onshore Oil and Gas Orders, and (c) Onshore Oil and Gas regulations (43 CFR Part 3160) if it is administratively and technically complete.

Evidence of bond coverage for lease operations must be submitted with the application. Bond amount must not be less than a \$10,000.00 lease bond, a \$25,000.00 statewide bond or a \$150,000.00 nationwide bond.

Pre-drill on-site inspections will be conducted for all wells. The inspection makes possible selection of the most feasible well site and access road from environmental, geological, and engineering points of view. The purpose of the field inspection is to evaluate the operator's plan, assess the situation for possible impacts, and to formulate resource protection stipulations. Surface use and reclamation requirements are developed during the on-site inspection that is usually scheduled within 10 days after receipt of the Notice of Staking (NOS) or APD. For operations proposed on privately-owned surface, if the operator after a good-faith effort is unable to reach an agreement with the private surface owner, the operator must post a bond to cover loss of crops and damages to tangible improvements prior to approval of the APD.

Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or project proponent in developing an APD for the lease to avoid and minimize impacts to sage-grouse or its habitat and will ensure that the best information about the GRSG and its habitat informs and helps to guide development of such Federal leases.

Normally, site-specific mitigations in the form of conditions of approval are added to the APD for protection of surface and subsurface (including groundwater) resource values in the vicinity of the proposed activity. The BLM is responsible for preparing environmental documentation necessary to satisfy the National Environmental Policy Act (NEPA) requirements and provide any mitigation measures needed to protect the affected resource values.

Conditions of approval implement the lease stipulations and are part of the permit when environmental and field reviews demonstrate the necessity for operating constraints or requirements. A surface restoration plan is part of an approved permit, either an APD or Sundry Notice that includes other surface-disturbing activities.

The authorized officer will act on the application in one of two ways:

Within 30 days after the operator has submitted a complete application including incorporating any changes that resulted from the onsite inspection the BLM will:

- (1) approve the application subject to reasonable conditions of approval if the requirements of the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), or other applicable law have been completed and, if on FS lands, FS has approved the Surface Use Plan of Operations; or
- (2) notify the operator that it is deferring action on the permit. The notice of deferral must specify:
 - a. any action the operator could take that would enable BLM to issue a final decision on the application. Actions may include but are not limited to; assistance with data gathering or assistance with preparation of analyses and documents;
 - b. and if necessary, a list of actions that BLM needs to take, including completing requirements of NEPA or other applicable law and a schedule for completing these actions.

The operator has 2 years from the date of the notice of deferral to take the action specified in the notice. If all analyses required by NEPA, NHPA, ESA and other applicable laws have been prepared, BLM and with FS concurrence, if appropriate, shall make a decision on the permit within 10 days of receiving a report from the operator addressing all of the issues or actions specified in the deferral notice and certifying that all required actions have been taken. If the operator has not completed the actions specified in the notice, BLM may deny the permit at any time later than 2 years from the operator's receipt of the deferral notice.

For drilling operations on lands with state or private mineral ownership, the lessee must meet the requirements of the mineral owner and the state regulatory agency. The BLM does not have jurisdiction over nonfederal minerals; however, the BLM has surface management responsibility in situations of BLM surface over nonfederal mineral ownership.

When final approval is given by the BLM, the operator may begin construction and drilling operations Approval of an

APD is valid for one year. If construction does not begin within one year, the permit must be reviewed prior to approving another APD.

A Sundry Notice is used to approve other surface and subsurface lease operations. When a well is no longer useful, the well is plugged and the surface reclaimed. A Sundry Notice is also used to approve well plugging and reclamation operations, although verbal approval for plugging may be given for a well that was drilled but not completed for production.

The period of bond liability is terminated after all wells covered by the bond are properly plugged and the surface reclaimed. The lands may then become available for future leasing.

Application for Permit to Drill

Applications for Permit to Drill are approved for the SDFO by the authorized officer at the NDFO. The approved APD includes Conditions of Approval, and Informational Notices that cite the regulatory requirements from the Code of Federal Regulations, Onshore Operating Orders and other guidance.

Conditions of Approval

Conditions of approval are mitigation measures that implement restrictions in light of site-specific conditions. General guidance for conditions of approval and surface operating standards is found in the BLM and USFS brochure entitled "Surface Operating Standards for Oil and Gas Exploration and Development" (USDI, BLM 2007) and BLM Manual 9113 entitled "Roads".

The BLM commonly applies best management practices when approving APDs. The sources of many of these may be found in Appendix B and on the internet at:

http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices.html

<http://www.blm.gov/bmp/> (a simpler internet address going to the same place)

http://www.blm.gov/mt/st/en/prog/energy/oil_and_gas/operations.html

Description: BMPs for oil and gas demonstrate practical ideas which may eliminate or minimize adverse impacts from oil and gas development to public health and the environment, landowners, and natural resources; enhance the value of natural and landowner resources; and reduce conflict.

The following mitigation measures may be applied to approved permits to drill as conditions of approval. The listing is not all-inclusive, but presents some possible conditions of approval that may be used in the planning area. The wording of the condition of approval may be modified or additional conditions of approval may be developed to address specific conditions.

In addition to the best management practices identified in Appendix B, new BMPs will constantly be developed, and the BLM will also develop site-specific practices on a case-by-case basis as needed.

Surface Conditions

If a tank battery is constructed on this lease, each tank setting, treater, and separator, must be surrounded on all sides by an impermeable berm or dike of sufficient capacity to adequately contain the contents of the largest vessel within it, plus one (1) day's production. All load lines must terminate within the berm or dike, unless there is an adequate box with overflow drain back inside the dike. If a tank battery is constructed for multiple wells, and/or is constructed off of this location, a separate authorization from the BLM would be necessary.

The operator shall immediately notify BLM if unexpected cultural resources are observed and shall avoid operations that would result in the destruction of these resources. Disturbance of such discoveries is not allowed until the operator is directed to proceed by BLM.

All above ground facilities will be painted a flat earthtone color which will blend in with the surrounding environment within 6 months of well completion, unless otherwise approved by BLM. (Color would be selected for the specific site from current color charts.)

Sewage will be disposed of according to county and state requirements, which mandate collecting and holding sewage onsite in portable chemical toilets, with disposal off site, in a municipal facility. Other waste and chemicals may not be disposed of or burned on location.

Store garbage and trash in a dumpster and dispose of it according to county and state regulations. It may not be disposed of or burned on location.

Saltwater or testing tanks will be located and/or diked so any spilled fluids will be contained. Saltwater and diesel tanks will not be placed on topsoil stockpiles.

The operator is responsible for the weed control in the permitted area. A Pesticide Use Proposal must be approved by BLM before spraying is begun. The landowner should also be consulted prior to spraying.

The operator is responsible for locating and protecting existing pipe lines, power lines, and telephone lines.

Save all of the topsoil from the location, stockpile it near the location in an accessible place, and re-use the topsoil to reclaim unused portions of the producing wellsite, or the whole abandoned wellsite, as applicable, after drilling and production testing are completed. Save all the topsoil from the access road, stockpile it along the access road, and re-use the topsoil to reclaim unused portions of the access road, shoulders and ditches, or the whole abandoned access road, as applicable, after drilling and production testing are completed.

A reserve pit liner will be required. The liner must have a burst strength of not less than 140 psi. If the reserve pit is excavated through sand, coal, or rock, the liner must have a burst strength of not less than 200 psi, and the bottom and sides of the pit must be covered with six inches of clay before the liner is installed. No trash will be disposed of in the reserve pit.

A fence may be dispensed with, during drilling as a safety measure, but prior to the location being left unattended when there is liquid in the pit, a fence must be erected around the reserve pit. The reserve pit must remain fenced until closure of the pit is complete, unless the entire location is fenced.

The location and facilities must be fenced for production, or individual pieces of well equipment may be fenced rather than the entire well location. Any fences around the entire location require cattle guards and gates where the road goes through, and must be maintained to keep livestock out until abandonment and reclamation of the well.

If the well is a producer, or permanently abandoned, all site reclamation must be completed within 6 months of the date drilling ceased, unless otherwise approved by BLM. Normally the reclamation will include major items such as: reserve pit reclamation, pit backfill settling, well pad recontouring, amendments such as: manure, straw, hay, wood chips and/or topsoil spreading, and seeding or hydroseeding.

Trenching or breaching of the reserve pit during reclamation is not allowed. In the event of winter freeze-up, reclamation may be put on hold by BLM. Pit fluids which can be separated from cuttings may not be disposed of on location. Separable pit fluids must be reused on another well, disposed of in a disposal well, or otherwise according to state regulations. When the well is abandoned, the operator must contact BLM for development of the final reclamation plan and for approval of the reclamation work. Only BLM can give approval of downhole plugging.

When the well is permanently abandoned: remove the scoria, gravel, or other surfacing from the location, as well as from the road, and reuse or dispose of this surfacing elsewhere.

Reshape the location to natural contours and provide needed water controls to prevent erosion, spread the topsoil and reseed on the contour.

If the well is a producer, the part of the location not needed for production or workover operations must be reclaimed to natural contours and provided with water erosion controls and reseeded.

The following seed mix, is to be used in spring seeding prior to May 30, and fall seeding from Oct. 1 to soil freeze up:

Thickspike Wheatgrass	6 lbs/acre of pure live seed (PLS)
Green Needlegrass	6 lbs/acre of pure live seed (PLS)
<u>Blue Grama</u>	<u>3 lbs/acre of pure live seed (PLS)</u>
Total	15 lbs/acre

If there is a problem with obtaining seed, contact the BLM for a replacement seed mix. Rates of seeding are given in “pure live seed” (PLS). Seed must be drilled on the contour (1/2 to 3/4 inch deep). Seed may be broadcast at double the above rates and then dragged to work it into the soil. The operator must furnish a notice of certified weed free seed to BLM prior to seeding disturbed areas. Fertilize with 30 pounds nitrogen and 40 pounds phosphorus per acre, when seeding. The reclamation will be considered successful when the reclaimed areas have been stabilized and reclaimed to the satisfaction of BLM. After final abandonment, when surface reclamation is complete and vegetation reestablished, any fences shall be removed or the fenced area reduced as required by the BLM. The seed mix and methods used to seed or fertilize may be adjusted by BLM as needed to accommodate differences in conditions at each site. BLM may require sage-brush or other species to be planted on some sites.

The permittee shall take precautions to protect all public land survey monuments, private property corners, and BLM boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of the privileges authorized by this permit, depending on the type of monument destroyed, the permittee shall reestablish or reference the same in accordance with the following: (1) procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States," (2) specifications of the county surveyor, or (3) the specifications of the BLM.

Rig stacking will only be allowed with prior approval of the BLM.

Approaches for Development of Oil and Gas Conditions of Approval (COAs) for Concerns not Addressed in Lease Stipulations

Certain activities that are not addressed in lease stipulations may result in surface disturbing or disruptive activities or create impacts to other resources depending on specific conditions at individual well sites. Some examples include operation and maintenance of wells, restricting the use of reserve pits above shallow water tables, use of diesel fuel when drilling, continuous travel to and from well sites and noise associated with these activities.

The following approaches address conditions of Approval (COAs) that may be developed to mitigate impacts commonly associated with oil and gas activities. These examples are not all inclusive; additional COAs will be developed as needed. These approaches may change as a result of new technology, improved science, changes to Best Management Practices, changes in status of special status species, and a host of other factors. Site specific conditions on or near the project site may also result in changes to the COA listed below.

Solutions which may be used to decrease the risk of groundwater pollution from well locations, would be to prevent any long term storage or any release of chemicals from a drilling system on the well site. This can be done with closed mud systems (using tanks rather than any excavated pits) with removal of mud fluids and fluid soaked cuttings from the well site, along with state regulation of the disposal of the materials. If a drying system can be devised with the closed mud system, dried cuttings and possibly even mud constituents could potentially be left on location in a closed and capped storage pit.

Another method of decreasing risk of contaminants is to place an impervious engineered cap over a conventional reserve pit. A slightly domed impermeable cap of the reserve pit, engineered to permit little or no rainwater percolating through the cover and into the pit, as well as engineered to last a very long time, should greatly decrease or even eliminate infiltration, and thus the entrainment and the risk of toxic pit constituents leaving the pit and following a pathway to reach and contaminate groundwater. At this time, current technology would likely necessitate materials like bentonite or high density polyethylene materials as likely candidates to use to attain a low level of permeability of 10^{-7} cm/s.

Encouraging reuse of reserve pit fluids can cut the total amount of wastes which need to be disposed. Identifying the contents of the drilling fluids or formation fracturing fluids and working with oil and gas companies to decrease the amounts of the more toxic chemicals used would decrease the potential for ground water contamination. Additional monitoring of the fluids used and the amounts used or left in closed pits, or restrictions in the use of excavated pits may be necessary to ensure that risks to ground water are minimized.

Geological Review and Engineering Analysis

The Field Office Geologist reviews the proposed casing program to ensure the surface casing would be placed below all fresh water zones. A Petroleum Engineer reviews the Drilling Plan to ensure the blowout preventer equipment, casing, cementing, and mud programs would provide equate protection to down hole resources and mitigate any impacts at the surface.

Most wells drilled in the Williston Basin, or its outliers, as well as other basins containing salt formations, use saltwater or a combination of saltwater and oil base fluid (invert) as a drilling fluid. The use of saltwater and oil based mud systems can contaminate fresh water zones or other usable water zones by infiltration or injection. The contamination of fresh water or other usable water resources by drilling or formation fluids would be prevented through the use of casing and Conditions of Approval (COA) to drill. A COA requires that the surface hole be drilled with fresh water and that no salt or materials having toxic effects be used during that part of the operation. After drilling the surface hole, casing (steel pipe) is placed in the hole and cement is circulated to the surface. This casing and cement protects the fresh and usable water zones while completing the drilling operations with salt water or oil based mud. The casing and cement also provide protection during production operations and well control operations.

A COA requires that all reserve pits be lined to prevent or reduce leakage of the pit contents into the surrounding soils or groundwater. Any hazardous materials or substances with toxic effects added to, or held within, the mud system during drilling operations, are contained in the well or on location in a reserve pit. These substances could cause contamination of the surface soils, surface water, and subsurface water resources from spills or in the case of leakage from the reserve pit.

Upon completion of the drilling program, the fluid is required to be removed from the reserve pit and disposed of in a state approved disposal well or used at another drilling well. Any remaining drill cuttings and solid drilling mud constituents, as well as a portion of absorbed fluids are contained within the lined reserve pit. Another COA requires that the liner used in the reserve pit be left in place upon abandonment and that the pit not be trenched.

Closed mud system use may be required, with the use of tanks rather than pits, and with no chemicals, muds, or rock cuttings left on location when drilling is done.

Drilling Operations

To ensure that drilling and completion operations are conducted in a safe and environmentally sound manner, the BLM reviews, and evaluates, approves and regulates all drilling and completion operations, and related surface disturbance associated with Federal and Indian oil and gas mineral development. Operators must submit Applications for Permit to Drill (APDs) to the agency in accordance to Onshore Order #1. Prior to approving an APD, the BLM identifies all potential subsurface formations that will be penetrated by the wellbore. This includes groundwater aquifers and any zones that would present potential safety or health risks that may need special protection measures during drilling, or that may require specific protective well construction measures. All well casing and cementing operations that occur on Federal/Indian lands would be reviewed and approved by BLM and conducted in accordance with the applicable requirements specified in Onshore Oil and Gas Order No. 2 and the American Petroleum Institute (API) standards.

The majority of oil and gas wells in the planning area have traditionally been drilled vertically. Horizontal wells have been drilled for a few years and are increasing. Information on types of wells drilled in South Dakota can be obtained from the South Dakota Department of Environment and Natural Resources (SD DENR) oil and gas at: <http://denr.sd.gov/des/og/oghome.aspx>.

Vertical Drilling

The vertical wells producing in the planning area are completed in a variety of formations for both gas and oil. The most productive completions have been those of the Red River Formations. Vertical well depths in South Dakota range from a depth of fifteen hundred feet in the Butte-Harding county border area to 13,000 feet in northern Harding County. Most producing wells are not deeper than 8600 feet.

Directional and Horizontal

Directional drilling may be used where the drill site cannot be located directly over the drilling target. There are limits to both the degree that the wellbore can be deviated from the vertical and the horizontal distance the well can be drilled away from the well site. Directional drilling can theoretically develop lands near the outer boundary of a lease affected by a NSO stipulation. Directional drilling can theoretically develop lands near the outer boundary of a lease affected by a NSO stipulation. Gas wells in the planning area are not deviated for technical and economic reasons.

Some benefits of directional drilling include the avoidance of sensitive or inaccessible surface features (resulting in greater protection of sensitive environments), and, when multiple wells are drilled from the same vertical wellbore or from the same surface location, a reduction in drilling time and associated waste volumes and emissions.

Recent technological advances in horizontal drilling and hydraulic fracturing, described below, have allowed development of unconventional zones (methane-bearing coal zones, oil or gas bearing shale zones, gas hydrates or “tight gas” in low porosity or low permeability traditional zones) that were once universally considered as uneconomic.

Horizontal drilling is commonly defined as deviating a wellbore at least 80 degrees from the vertical so that the borehole penetrates a productive formation in a manner parallel to the formation. Most horizontal wells are drilled vertically from the surface to several hundred feet above the productive formation. The wellbore is then drilled in a curve ending with well going sideways through the productive formation.

The currently producing horizontal wells in the planning area are producing oil from the Ordovician Red River.

In addition to the benefits listed for directional drilling above, another benefit of horizontal drilling is that it exposes the wellbore to a far greater surface area of hydrocarbon-bearing rock when compared to a typical vertical well. Horizontal wells tend to produce more than vertical wells since there is more reservoir rock exposed. This technology also eliminates the need to drill as many wells, since a horizontal well would be capable of producing the oil and gas from a larger areal extent. While this technology may reduce the overall foot print of an oil or gas field, as a result of having multiple wells (multi-well pad), and possibly production facilities on one well pad, the pad is typically larger in size for drilling and production operations. This reduces the acres of surface disturbance per well. Drilling time may be longer for horizontal wells than for a vertical well drilled to the same producing formation; however, technology and increased experience of the area is decreasing drill time for horizontal wells. The need for more drilling mud volume may also increase water needs, pit size or number of holding tanks on site compared to a vertical well to the same producing formation.

Drilling and completion costs for directional and horizontal wells are typically significantly higher than for conventional vertical boreholes, even when the cost savings associated with reduced need for surface disturbance is considered. Eustes (2003) and Fritz, Horn, and Joshi (1991) identified the following specialized requirements and risk factors unique to horizontal and directional drilling that can affect drilling and completion costs for these types of wells:

- specialized equipment (e.g., mud motors, measurement while drilling tools) and specially trained personnel;
- a larger drilling rig and associated equipment;
- casing and drilling string modifications to address problems associated with ovality and bending stresses;
- increased risk of borehole damage due to unique tectonic stresses;
- lengthened overall drilling time on location because more hole is drilled in S-shaped boreholes and horizontal boreholes compared to vertical wells;
- increased torque and drag on borehole equipment; and,
- lengthened overall drilling time on location compared to vertical wells because of slower penetration rates due to increased torque and drag in directional and horizontal wellbores (however, increased operator and driller experience with horizontal drilling has resulted in decreased drilling times in North Dakota over the past several years).

In addition to increased costs, the risk of losing the well because of geologic or mechanical failures is also greater in directional and, particularly, horizontal boreholes than in conventional vertical boreholes. As a result of these increased costs and risk, operators tend to prefer vertical over directional or horizontal boreholes unless special circumstances exist that make such drilling a necessity or economically attractive. For example, the geology of a reservoir may be such that a vertical borehole may only contact a few feet of the productive horizon, while a horizontal borehole may be able to contact tens to thousands of feet (depending on factors such as how the well is completed and the areal extent of the pool). In a case such as this, the operator must make the determination that the increased potential for productivity outweighs the increased drilling costs and inherent risks involved in directional and horizontal drilling.

Hydraulic Fracturing

Hydraulic fracturing has been utilized by the oil and gas industry since the late 1940's. In South Dakota, nearly all hydraulic fracturing is used on a small scale in vertical wells. Outside the planning area, hydraulic fracturing, in conjunction with horizontal drilling described above, has allowed for development of unconventional zones that were once considered uneconomical, like the Bakken and Three Forks Formations in the Williston Basin area of North Dakota and Montana. The greatest potential use for hydraulic fracturing, in conjunction with horizontal drilling, is likely to be in the Three Forks Formation in South Dakota. However, in time, other formations may be found to be better candidates.

Hydraulic fracturing is a technique used to create additional space and connecting existing fractures and existing rock pores with newly created fractures that are located in deep underground geologic formations. The induced space allows the rock to more readily release oil and natural gas so it can flow to the surface via the well bore that would otherwise be

uneconomical to develop. Wells that undergo hydraulic fracturing may be drilled vertically, horizontally, or directionally and the resultant fractures induced by the hydraulic fracturing can be vertical, horizontal, or both. The typical steps of hydraulic fracturing can be described as follows:

1. Water, sand and additives are pumped at high pressures down the wellbore.
2. The liquid goes through perforated sections of the wellbore and into the surrounding formation, fracturing the rock and injecting sand or other proppants into the cracks to hold them open.
3. Experts continuously monitor and gauge pressures along with the volume of fluids and proppants, while studying how the sand reacts when it hits the bottom of the wellbore; slowly increasing the density of sand to water as the frac progresses.
4. This process may be repeated multiple times, in “stages” to reach maximum areas of the wellbore. When this is done, the wellbore is temporarily plugged between each stage to maintain the highest water pressure possible and get maximum fracturing results in the rock.
5. Frac plugs are drilled or removed from the wellbore and the well is tested for results.
6. The water pressure is reduced and fluids are returned up the wellbore for disposal or treatment and re-use, leaving the sand in place to prop open the cracks and allow the oil/gas to flow to the well bore.

Fracturing fluid is typically more than 98 percent water and sand, with small amounts of readily available chemical additives used to carry the proppant and control the chemical and mechanical properties of the water and sand mixture. Proppant, consisting of synthetic or natural silica sand, may be used in quantities of few hundred tons for a vertical well to a few thousand tons for a horizontal well. The amount of water needed to fracture a well in the planning area depends on the geologic basin, the formation, and depth and type of well (vertical, horizontal, directional), and the proposed completion process.

Several sources of water are available for drilling operations and hydraulic fracturing in the planning area. The use of any specific water source on a federally administered well, requires the proposal be reviewed and analyzed through the NEPA process for BLM approval during the APD stage to ensure compliance with state water laws and federal regulations.

Water rights are addressed by the South Dakota Department of Environment and Natural Resources. Any BLM actions would adhere to DENR water quality rules.

Drilling and Completion Costs

The cost of developing conventional deposits of oil and gas in the Rocky Mountain region is higher than the average for the onshore 48 contiguous states (Cleveland, 2003). Factors that may contribute to higher costs in the planning area could be:

- changes in rig availability;
- changes in development priority as industry focus on certain plays evolves with new discoveries and changes in oil and gas price;
- harsh environments (particularly cold temperatures); and,
- labor market conditions.

Expenditures for exploration and development in the United States onshore increased 30 percent from 2005 to 29 billion dollars in 2006 (DOE-EIA, 2007b). This was more than three times the average annual expenditure level in the 1990s and the highest amount since 1982. Most of the expenditures in 2006 were for development (\$26 billion).

The National Petroleum Council (2003) reported drilling and completion costs for vertical wells in the Williston and Northern Great Plains region. They reported that the average oil well drilling and completion cost for wells to depths of 5,000 feet was \$280,000. Wells in the 5,000- to 10,000-foot range cost an average of \$955,000 to drill and complete. All cost components such as permitting, location construction, mobilization, rentals and services, tangible items, and stimulations were assumed to be included in these costs.

For gas wells, the National Petroleum Council (2003) reported an average cost for wells to depths of 5,000 feet was \$83,000. Wells in the 5,000- to 10,000-foot range cost an average of \$571,000 to drill and complete. Gas well drilling and completion costs are typically much cheaper than for oil wells in the Williston Basin.

The National Petroleum Council (2003) also reported dry-hole well costs of \$100,000 for average wells to depths of 5,000 feet, and \$506,000 for wells between 5,000 and 10,000 feet deep.

Horizontal well drilling costs are much higher in the Williston Basin. Through June of 2008, EOG Resources, Incorporated

has reported an average drilling cost for 72 Bakken Formation horizontal wells of \$5 million per well (North Dakota Bakken Shale Formation News, 2008). Companies are currently using a multi-stage hydraulic fracturing to complete a horizontal borehole. This increases the cost of a well up to \$8 million or more (Petroleum News, 2013).

Operators in the Rocky Mountain region have recently been faced with increases in drilling and completion costs. Drilling rates have increased 20 to 50 percent (Rocky Mountain Oil Journal, 2005) and service costs have also increased. Rig shortages have affected most areas of the region. New planning area wells may be more expensive to equip and operate because of the following factors:

- remoteness and cold temperatures, which often requires dehydrators and line heaters, more expensive types of steel casing, and insulation of surface equipment;
- workovers and preventive maintenance are more frequent, which minimizes shut-in days in the winter when well site access is difficult; and,
- lack of rig availability due to competition for rigs within the Bakken play.

Engineering Conditions of Approval

Some examples of typical Engineering Conditions of Approval are as follows:

All Blowout Prevention Equipment (BOPE) must comply with the minimum requirements of Onshore Oil and Gas Order No. 2 for a 5 M system, including test pressures and frequencies.

Wait-on-cement times must be adequate to achieve a minimum of 500 psi compressive strength. Top-of-cement behind production casing must be above Inyan Kara group.

Gas Flaring: Gas produced from this well may not be vented or flared beyond an initial, authorized test period of 30 days or 50 Mmcf following its completion, whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted, and you shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.

A gas analysis, which includes H₂S content, must be made and submitted to this office within three months of completion of this well.

Any unconfined gas that is produced and exceeds 20 ppm H₂S, must be separated and flared. The flare system must include a method of insuring continuous ignition of the gas.

If the concentration of H₂S gas at any point in the facility (i.e.; gas stream, tank vapors, treater, etc.) exceeds 20 ppm, the facility must have a wind-sock placed on the tank battery so that it is visible from everywhere on the location and H₂S warning signs placed at appropriate facilities.

Issuance of Rights-of-Way

Rights-of-way are required for all facilities, tank batteries, pipelines, truck depots, power lines, and access roads that occupy federally managed lands outside the lease or unit boundary. When a third party (other than the operator or the federal government) constructs a facility or installation on or off the lease, a right-of-way is also required.

Informational Notice

The following items comprise the information notice which applies to all federal and Indian minerals wells in North Dakota and South Dakota:

The enclosed Application for Permit to Drill (APD) is approved, subject to the following special conditions. Please be advised that all lease operations are also subject to the terms of the lease, all lease stipulations, and any written instructions or orders of the authorized officer or Surface Management Agency (see attachment to 13 point Surface Use Plan).

It is the sole responsibility of the operator and/or lessee to ensure that all the requirements of Federal Oil and Gas

regulations (43 CFR 3100), Notice to Lessees (NTLs), and Federal Onshore Oil and Gas Orders No. 1, 2, 3, 4, 5, 6, and 7 are complied with. Any major deviation from the terms of this APD or Surface Use Plan requires prior approval.

All submitted information not marked "CONFIDENTIAL INFORMATION" will be available for public inspection upon request. (Note: If a submittal is to be held confidential, each page must be so marked.) However, information on Indian Trust Minerals is also held confidential.

Spills, accidents, fires, injuries, blowout and other undesirable events, as described in NTL MSO-1-92, must be reported to this office within the timeframes in NTL MSO-1-92. Furthermore, all spills (saltwater or oil) or pipeline breaks outside the diked area shall be reported within 24 hours to the Surface Management Agency.

Under Environmental Obligations (43 3162.5-1), Disposition of Production (43 CFR 3162.7-1) and Disposal of Produced Water (Onshore Order No. 7):

You are required to take all necessary steps to prevent any death of a migratory bird in pits or open vessels associated with the drilling, testing, completion, or production of this well. The death of any migratory bird found in such a pit or open vessel is a violation of the Migratory Bird Treaty Act and is considered a criminal act. Any deaths of migratory birds attributable to pits or open vessels associated with drilling, testing, completing, or production operations must be reported to this office and the United States Fish and Wildlife Service within 24 hours.

We may require that the pit be designed or the open vessel be covered to deter the entry of birds in any facility associated with drilling, testing, completion, or production of this well. Fencing, screening, and netting of pits may be required as a means to deter bird entry. These conditions would most likely be imposed to prevent the entry of migratory birds if oil is left in pits or open vessels after the cessation of drilling or completion of operations, if water disposal pits consistently receive oil, or if pits or open vessels are used repeatedly for emergency situations which result in accumulation of oil.

Voluntary pit fencing, screening, and netting, or sealing vessels, is encouraged to avoid potential instances that may result in the death of a migratory bird. * For the SD Field Office netting of pits is required.

This APD permit is valid for either two (2) years from the approval date or until lease expiration, whichever occurs first.

You have the right to request a State Director Review of this decision pursuant to 43 CFR 3165.3(b), copy attached. An SDR request, including all supporting documentation, must be filed with the Montana State Office, State Director (MT-920) at P.O. Box 36800, Billings, Montana 59107 within 20 business days of your receipt of this decision. If adversely affected by the State Director's decision, it can be further appealed to the Interior Board of Land Appeals (IBLA) pursuant to 3165.4, 4.411, and 4.413, a copy of each attached. Should you fail to timely request an SDR, or after receiving the State Director's decision, fail to timely file an appeal with the IBLA, no further administrative review of this decision will be possible.

Notification and Report Requirements

A complete copy of the approved (APD), including conditions, stipulations, exhibits, and the H₂S contingency plan (if required) must be on the well site and available for reference during the construction and drilling phases.

The North Dakota Field Office is to be verbally notified of the following actions:

At least 24 hours prior to beginning road and location construction.

Not more than 24 hours after the well is spudded, or on the next regular business day.

At least 24 hours prior to running/cementing surface casing. (This notification may be combined with the spud notice).

At least 24 hours prior to drilling 1000' above the Mission Canyon Formation or any H₂S bearing formation, or on next regular business day.

Prior approval for abandonment must be obtained from the Authorized officer. For verbal plugging orders on drilling locations, notify prior to plugging.

BLM representatives can be reached Monday through Friday (7:45 AM - 4:30PM) at the office telephone no. (701) 227-7700. The BLM personnel can be contacted after hours or on weekends for plugging approvals or any other approvals/change in plans which do not allow for communications during normal office hours by calling the following personnel:

Asst. Field Office Mgr., Minerals
Supr Petroleum Engineer Tech.
Petroleum Engineer
Environmental Protection Specialist
(Also see **Informational Notice**)

Plugging Requirements

All formations bearing usable-quality water, oil, gas, or geothermal resources, and/or a prospectively valuable deposit of minerals shall be protected. Plugging design for an abandonment hole shall include the following:

Open Hole:

- i. A cement plug shall be placed to extend at least 50 feet below the bottom (except as limited by total depth (TD) or plugged back total depth (PBSD)), to 50 feet above the top of:
 - a. Any zone encountered during which contains fluid or gas with a potential to migrate;
 - b. Any prospectively valuable deposit of minerals.
- ii. All cement plugs, except the surface plug, shall have sufficient slurry volume to fill 100 feet of the hole, plus an additional 10 percent of slurry for each 1,000 feet of depth.
- iii. No plug, except the surface plug, shall be less than 25 sacks without receiving specific approval from the authorized officer.
- iv. Extremely thick sections of single formation may be secured by placing 100-foot plugs across the top and bottom of the formation, and in accordance with item ii hereof.
- v. In the absence of productive zones or prospectively valuable deposits of minerals which otherwise require placement of cement plugs, long sections of open hole shall be plugged at least every 3,000 feet. Such plugs shall be placed across in-gauge sections of the hole, unless otherwise approved by the authorized officer.

Cased Hole: A cement plug shall be placed opposite all open perforation and extend to a minimum of 50 feet below (except as limited by TD or PBSD) to 50 feet above the perforated interval. All cement plugs, except the surface plug, shall have sufficient slurry volume to fill 100 feet of hole, plus an additional 10 percent of slurry for each 1,000 feet of depth. In lieu of the cement plug, a bridge plug is acceptable, provided:

- i. The bridge plug is set within 50 feet to 100 feet above the open perforations;
- ii. The perforations are isolated from any open hole below; and
- iii. The bridge plug is capped with 50 feet of cement. If a bailer is used to cap this plug, 35 feet of cement shall be sufficient.

Silica Sand or Silica Flour: Silica sand or silica flour shall be added to cement exposed to bottom hole static temperatures above 230 ° F to prevent heat degradation of the cement.

Mud: Each of the intervals between plugs shall be filled with mud of sufficient density to exert hydrostatic pressure exceeding the greatest formation pressure encountered while drilling such interval. In the absence of other information at the time plugging is approved, a minimum mud weight of 9 pounds per gallon shall be specified.

Wait on cement times must be adequate to achieve a minimum of 500 psi compressive strength. All well pluggings are witnessed by Petroleum Engineering Technicians.

Hazardous Materials

Plugging and acceptance of abandonment of a well does not absolve a company of liability for hazardous materials.

Paleontological/Cultural Stipulations

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological materials which are uncovered during construction. The operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
- a timeframe for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and the mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with the process, the AO will assume responsibility for whatever recordation and stabilization of the expose materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

Construction

Construction of the access road and the well site is necessary before drilling operations begin. The extent of surface disturbance necessary for construction depends on the terrain, depth of the well, drill rig size, circulating system, and safety standards.

The depth of the drill test determines the size of drill rig needed, and therefore, the size of the work area necessary, the need for all-weather roads, water requirements, and other needs. The terrain influences the construction problems and the amount of surface area to be disturbed. Reserve pit size may vary because of well depth, drill rig size, or circulating system.

Access roads to well sites in the planning area usually consist of running surfaces 14 to 24 feet wide that are ditched on one or both sides. Many of the roads constructed will follow existing roads or trails. New roads might be necessary because existing roads are not at an acceptable standard. For example, a road may be too steep so that realignment is necessary.

Roads can be permanent or temporary, depending on the success of the well. The initial construction can be for a temporary road; however, it is designed so that it can become permanent if the well produces. Not all temporary roads constructed are immediately rehabilitated when the drilling stops. A temporary road is often used as access to other drill sites. The main roads and temporary roads require graveling to be maintained as all-weather roads. This is especially important in the spring. Access roads may be required to cross public lands to a well site located on private or state lands. The portion of the access road on public land would require a BLM right-of-way.

The amount of level surface required for safely assembling and operating a drilling rig varies with the type of rig, but averages 300 feet by 400 feet. Approximately 3-1/2 acres would be impacted by well site construction. The area is cleared of large vegetation, boulders, or debris. Then the topsoil is removed and saved for reclamation. A level area is then constructed for the well site, which includes the reserve pit. Bulldozers and motor scrapers are typically used to construct the well pad. The well pad is flat (to accommodate the drill rig and support equipment) and large enough to store all the equipment and supplies without restricting safe work areas. The drill rig must be placed on "cut" material rather than on "fill" material to provide a stable foundation for the rig. The degree of cutting and filling depends on terrain; that is, the flatter the site, the less dirt work is required.

Hillside locations are common, and the amount of dirt work varies with the steepness. A typical well pad will require a cut 10 feet deep against the hill and a fill 8 feet high on the outside. It is normal to have more cut than fill to allow for compaction, and any excess material is then stockpiled. Eventually, when the well is plugged and abandoned, excavated

material is put back in its original place.

Reserve pits are normally constructed on the well pad. Usually the reserve pit is excavated in “cut” material on the well pad. The reserve pit is designed to hold water, drill cuttings, and used drilling fluids. Generally, reserve pits are rectangular in shape and 8 to 12 feet deep, however, the size and number of pits depends on the depth of the well, circulating system and anticipated down hole problems, such as excess water flows. The reserve pit can be lined with a synthetic liner to contain pit contents and reduce pit seepage. BLM normally requires a synthetic liner.

If the well is a producer, casing is set and cemented in place.

Directional drilling may be used where the drill site cannot be located directly over the drilling target. There are limits to both the degree that the well bore can be deviated from the vertical and the horizontal distance the well can be drilled away from the well site.

Horizontal wells are drilled similarly to directional wells, except that the bottomhole location of the well is not a single point, but rather a lateral horizontal section. They are drilled to increase the recovery of oil and gas reserves from vertically fractured reservoirs, or reservoirs with directional permeability.

Environment and Safety

During drilling and production operations for any well the BLM will enforce the provisions of the regulations, Onshore Oil and Gas Operating Orders, and Notice to Lessees NTL-MSO-1-92, Report of Undesirable Events, to ensure operations are carried in a manner that protects the mineral resources, other natural resources, and environmental quality. Regulations at 43 CFR § 3162.5 require that the operator exercise due care and diligence to assure that leasehold operations do not result in undue damage to surface or subsurface resources or surface improvements. All produced water must be disposed of by methods approved by the BLM. Upon completion of operations the operator shall reclaim the surface in a manner approved of by the BLM. All spills or leakages of oil, gas, produced water, toxic liquids, blowouts, fires, personal injuries, and fatalities must be reported by the operator. The operator is required to exercise care in taking measures approved by the BLM to control and remove pollutants and extinguish fires. An operator's compliance with the regulations at 43 CFR § 3162.5 does not relieve him of the obligation to comply with any other law or regulations. Finally, the regulations authorize the BLM to require an operator to file a contingency plan describing procedures to be implemented to protect life, property, and the environment.

Production and Development

Production

Production begins when a well yields oil or gas in commercial quantities. If formation pressure is sufficient to raise oil to the surface, the well is completed as a flowing well. A pumping unit is installed if the formation pressure is not sufficient to bring the oil to the surface. When the well is completed as a free-flowing well, an assembly of valves and special connections known as a “Christmas tree” (so called because of its many branch like fittings) is installed on top of the casing to regulate the flow of the well. Later, when the natural pressure declines, the Christmas tree can give way to a simple wellhead arrangement of valves and a pumping unit to lift the oil artificially. Many pumping units are “beam” style pumps that are powered by electric motors or gasoline engines. Most gas wells produce by natural flow and do not require pumping. Surface facilities at a flowing well are usually in a small area containing a gas well Christmas tree, a dehydrator, a produced water pit, and a meter house. Separators, condensate tanks, and compressors may be included. Some gas wells require continuous water pumping as water entering the well chokes off the gas flow.

Development

New field development may be analyzed under NEPA by means of an environmental assessment (EA) or environmental impact statement (EIS). The operator should then have an idea of the extent of drilling and disturbance required to extract and produce the oil and gas. When an oil or gas discovery is made, a well spacing pattern must be established before development drilling begins. Development can take years and include from one or two wells to more than a hundred wells per field. Roads to producing wells are upgraded to all-weather roads as necessary. Pipelines, electrical transmission lines, separators, dehydrators, sump pits, and compressor stations soon follow. Sometimes oil and gas processing facilities are built in or adjacent to the field.

Further Seismic Testing

More detailed seismic work can be done to achieve better definition of the petroleum reservoir. Diagonal seismic lines can be required to tie the previous seismic work to the discovery well. The discovery well can be used to conduct studies to correct the previous seismic work and provide more accurate subsurface data.

Spacing Requirements

A well spacing pattern must be established before development drilling begins. Information considered in establishment of a spacing pattern includes data from the discovery well on porosity, permeability, pressure, composition, and depth of formations in the reservoir; well production rates and type (predominantly oil or gas); and the economic effect of the proposed spacing on recovery. The state of South Dakota establishes well spacing patterns for both exploratory and development wells which the BLM generally adopts. The state specifies the minimum distance from lease lines or government survey lines for the bottom-hole location of the well bore depending upon depth of the well. The spacing regulations determine the acres assigned to each well. Spacing unit size is established to provide for the most efficient and economic recovery of oil or gas from a reservoir. Normal well spacing ranges from 40 acres to 1280 acres. Wells deeper than 11,000 feet can be no closer than 1,650 feet to other producing wells below 11,000 feet. Only one producing well per formation is allowed in each 40, 80, 160, 320, 640, and 1280 acre unit.

Drilling of Development Wells

The procedures used in drilling development wells are the same as those used for wildcat wells, but usually with less subsurface sampling, testing, and evaluation. The rate at which development wells are drilled in a field depends on factors such as whether the field is developed on a lease basis or unitized basis, the probability of profitable production, the availability of drilling equipment, lease requirements, and the degree to which limits of the field are known. Some fields go through several development phases, the first resulting from the original discovery and others from later discovery. A field can be considered fully developed and produce for several years, and then a well may be drilled to a deeper or shallower pay zone. Discovery of a new pay zone in an existing field is a “pool” discovery (as distinguished from a new field discovery). A pool discovery may lead to the drilling of additional wells, often from the same drilling pad as existing wells.

Inspections

Geophysical operations and lease operations are inspected to determine compliance with approved permits, to resolve conflicts or correct problems and to determine effectiveness and need of lease stipulations. All inspections are documented. Operators are required to correct problems or violations.

Surface Requirements

Field development activities that cause surface disturbance include access roads, well sites, production facility sites, flow line and utility line routes and waste disposal sites. Surface uses in a gas field will be less than in an oil field, because gas wells are usually drilled on larger spacing units. The spacing pattern of 640 acres per well, which is common in gas fields, will require only one well per section and might require only ½ mile of access roads and pipelines. Production facilities include separation and storage equipment. Separation equipment is required when production includes a combination of oil, gas, or water and storage equipment is required for holding liquids prior to sales.

Flow Lines

Oil and gas are transferred from the well to storage facilities through small diameter (<6 inches) flow lines. Flow lines can be on the surface, buried or elevated. Produced water, gas, or polymerized liquid is transferred from storage facilities to injection wells for secondary recovery.

Separating, Treating, and Storage

Any water or gas associated with produced oil is separated from the oil before it is placed in storage tanks. The treating facilities are located at a storage tank battery. Low-pressure petroleum that must be pumped from the well is treated in a single separation. High pressure, flowing petroleum can require several stages of separation, with a pressure reduction accompanying each stage.

Produced gas is sold when there is sufficient volume, necessary transportation, a market, and it is economical. Generally,

Oil and Gas Supplementary Information

if the volume of produced gas is too low for sales, it is used as fuel for well pump engines and heating fuel for the treaters. If the volume of produced gas exceeds fuel requirements on the lease but gas sales are not possible, the gas can be flared or vented into the atmosphere when authorized by permit in accordance with state and federal regulations. When water is produced with the hydrocarbons, it is separated before the gas is removed. In primary operations, where natural pressures or gravity causes the petroleum in the reservoir to flow to the wellbores, the degree of mixing is high enough to require chemical and heat treatment to separate the oil and water. In secondary production, where water injection or other methods are used to force additional petroleum to the wellbore, the oil and water often are not highly emulsified. In this case, the oil and water can be separated by gravity in a tall settling tank. Produced water can be disposed of by injection into the subsurface, surface evaporation or beneficial purposes such as water for livestock or irrigation.

Produced water from oil and gas operations is normally disposed of by subsurface injection or in surface pits. Regardless of the method of disposal, it must be acceptable to the BLM, in accordance with the requirements of Onshore Oil and Gas Order No. 7, titled "Disposal of Produced Water." Disposal of produced water by injection wells requires permits from the South Dakota Department of Environment and Natural Resources. When produced water is disposed underground, it is introduced or injected under pressure into a subsurface horizon containing water of equal or poorer quality. Produced water may be injected into the producing zone from which it originated to stimulate oil production. Dry holes or depleted wells are commonly converted for saltwater disposal and occasionally new wells are drilled for this purpose. The law and regulations require that all injection wells be permitted under the Underground Injection Control program.

Under the Underground Injection Control approval process, the disposal well must be pressure tested to ensure the integrity of the casing. The disposal zone must also be isolated by use of tubing and mechanical plug called a packer. The packer seals off the inside of the casing and only allows the injected water to enter the disposal zone. The tubing and packer are also pressure tested to ensure their integrity. These pressure tests confirm isolation of the disposal zone from possible usable water zones. The oil is transported to storage tanks through flow lines after separation from any water or gas. Storage tanks are usually located on the lease either at the producing well or at a central production facility. The number and size of tanks are dependent upon the type and amount of production on the lease.

Abandonment

When drilling wells are unsuccessful or production wells are no longer useful, the well is plugged, equipment is removed from the well site or production facility site, and the site is abandoned. The well bore is secured by placing cement plugs to isolate hydrocarbon-producing formations from contaminating other mineral or water bearing formations. The site and roads are then restored as near as possible to original contours. Topsoil is replaced and the recontoured areas are seeded. Reclamation of access roads and well sites on privately owned surface is completed according to the surface owner's requirements.

Rehabilitation requirements generally are made a part of the Application for Permit to Drill. Upon completion of abandonment and rehabilitation operations, the lessee or operator notifies the SDFO, via the NDFO that the location is ready for inspection. Final abandonment will not be approved until the required surface reclamation work has been completed to the satisfaction of the BLM or surface owner. The period of bond liability for the well site is terminated after approval of final abandonment. Reclamation of the reserve pit is part of the well site reclamation process. Reserve pit reclamation includes removal of fluids to a disposal well or commercial pit and burial of solids in the pit. Solids should not be buried until dry and then covered with a minimum of 6 feet of native soil. Any pit liner may be buried in place. Methods such as solidification or dewatering may be used to help dry the solids.

Regulations, Laws, and Special Procedures

Unit and Communitization Agreements

Unit and communitization agreements can be formed in the interest of conservation and to allow for the orderly development of oil and gas reserves. A unit agreement provides for the recovery of oil and gas from the lands as a single consolidated entity without regard to separate lease ownerships. An exploratory unit is used for the discovery and development of the field in an orderly and efficient manner. Paying and nonpaying well determinations are made for each well drilled. If the well is nonpaying as defined by the agreement, the production is allocated on a lease basis. If the well is a paying unit well, a participating area is formed and the production is allocated to all interest owners in the participating area based on surface area. A secondary unit is formed after the field has been defined and enhanced recovery techniques are being utilized. Secondary recovery techniques include water injection, natural gas injection, or carbon dioxide injection. Injection is initiated to maintain the reservoir pressure to maintain oil production. The

agreement provides for the allocation of production among all the interest owners.

A communitization agreement combines two or more leases (federal, state, or fee) that otherwise could not be independently developed in conformity with established well spacing patterns. The leases within the spacing unit share in the costs and benefits of the well drilled in the spacing unit. Therefore, unit and communitization agreements can lessen the amount of damage to the environment and save dollars by eliminating unnecessary wells, roads, pipelines, and lease equipment.

Split Estate

Part of the area included in the planning area contains lands known as split estate lands. These are lands where the surface ownership is different from the mineral ownership. Management of federal oil and gas resources on these lands is somewhat different from management on lands where both surface and mineral ownership is federal. On split estate lands where the surface ownership is private, the BLM places necessary restrictions and requirements on its leases and permit approvals and works in cooperation with the surface owner. BLM has established policies for the management of federal oil and gas resources in accordance with federal laws and regulations.

The BLM does not have the legal authority to regulate how private surface is managed. BLM does have the statutory authority to require measures by lessees to avoid or minimize adverse impacts that may result from federally authorized mineral lease activities. These measures, in the form of lease stipulations or permit conditions of approval, are intended to protect or preserve the privately owned resources and prevent adverse impacts to adjoining lands, not to dictate management to the surface owner. The term split estate can also refer to lands where the surface ownership is federal and the mineral ownership is private. In this situation, BLM is the surface owner, and works in cooperation with the proponent and the state regulatory agency that approves private mineral applications. BLM has responsibilities in this situation under the previously mentioned statutes; however, BLM does not have the authority to approve or disapprove the mineral owner's actions. The mineral estate owner usually has the right to enter the land and use the surface that is necessary and reasonable for mineral development through either a reserved or an outstanding right contained in the deed.

Appendix E.10

Guidance and Examples for Oil and Gas Conditions of Approval (COAs)

Certain activities that are not addressed in lease stipulations may result in surface-disturbing or disruptive activities or create impacts to other resources depending on specific conditions at individual well sites. Some examples include operation and maintenance of wells, restricting the use of reserve pits above shallow water tables, use of diesel fuel and other constituents when drilling, continuous travel to and from well sites and noise associated with these activities.

The following approaches address Conditions of Approval (COAs) that may be developed to mitigate impacts commonly associated with oil and gas activities. These examples are not all inclusive; additional COAs will be developed as needed. These approaches may change as a result of new technology, improved science, changes to Best Management Practices, changes in status of special status species, and a host of other factors. Site-specific conditions on or near the project site may also result in changes to the COA listed below.

- Restricting the use of reserve pits over shallow water tables
- Reserve pits and use of diesel fuel and other constituents
- Operation and Maintenance activities and wildlife timing limit stipulations
- Noise disturbance to sharp-tails and sage grouse or other.

Appendix E.11

U.S. Army Corps of Engineers Oil and Gas Lease Stipulations

The following "form", 3109-2, is not the actual form, but has all the same content as the form. The actual form may be obtained from the BLM.

Form 3109-2
(December 1970)
(formerly 3103-3)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STIPULATION FOR LANDS UNDER JURISDICTION
OF DEPARTMENT OF THE ARMY,
CORPS OF ENGINEERS

Serial Number

Name of Project

The lands embraced in this lease issued under the Mineral Leasing Act of February 25, 1920 (41 Stat. 437; 30 U.S.C. 181 *et seq.*), as amended, or the Mineral Leasing Act for Acquired Lands of August 7, 1947 (61 Stat. 913; 30 U.S.C. 351 *et seq.*) being under the jurisdiction of the Department of the Army, Corps of Engineers, the lessee hereby agrees:

(1) That *all* rights under this lease are subordinate to the rights of the United States to flood and submerge the lands, permanently or intermittently, in connection with the operation and maintenance of the above named project.

(2) That the United States shall *not* be responsible for damages to property or injuries to persons which may arise from or be incident to the use and occupation of the said premises, or for damages to the property of the lessee, or for injuries to the person of the lessee (if an individual), or for damages to the property or injuries to the person of the lessee's officers, agents, servants, or employees, or others who may be on said premises at their invitation or the invitation of any one of them arising from or incident to the flooding of the said premises by the Government or flooding from any other cause, or arising from or incident to any other governmental activities; and the lessee shall hold the United States harmless from any and all such claims.

(3) That the work performed by the lessee on the lands shall be under the general supervision of the District Engineer, Corps of Engineers, in direct charge of the project, and subject to such conditions and regulation as may be prescribed by him, and the plans and location for all structures, appurtenances thereto, and work on said lands shall be submitted to the said District Engineer for approval, in advance, of commencement of any work on said lands. The District Engineer shall have the right to enter on the premises, at any time, to inspect both the installation and operational activities of the lessee.

(4) That no structure or appurtenance thereto shall be of a material or construction determined to create floatable debris.

(5) That the construction and operation of said structures and appurtenances thereto shall be of such a nature as not to cause pollution of the soils and the waters of the project.

(6) That the United States reserves the right to use the land jointly with the lessee in connection with the construction, operation, and maintenance of the Government project and to place improvements thereon or to remove materials therefrom, including sand and gravel and other construction material, as may be necessary in connection with such work, and the lessee shall not interfere, in any manner, with such work or do any act which may increase the cost of performing such work. If the cost of the work performed by the Government at and in connection with the project, including work performed on lands outside the property included in the lease, is made more expensive by reason of improvements constructed on the leased property by the lessee, the lessee shall pay to the United States money in an amount, as estimated by the Chief of Engineers, sufficient to compensate for the additional expense involved.

Signature of Lessee

Please Note: The following stipulations were developed by the US Corps of Engineers (COE) for use in oil and gas leases on COE lands along Lake Sakakawea in North Dakota. If any oil and gas parcels are processed for leasing in South Dakota, these stipulations will be modified by the COE for the same purpose on COE lands in South Dakota.

Garrison Dam/lake Sakakawea Project, North Dakota Bureau of Land Management

Federal Mineral Lease Stipulations

- a. No surface occupancy shall be allowed on those lands below elevation 1855 feet msl (mean sea level) or within 300 feet horizontally from said elevation.
- b. All mineral exploration and production infrastructure shall have a minimum setback of twelve-hundred (1,200) feet from any Tribal, Federal, State, County or private infrastructure. This includes but is not limited to; levees, dams, intakes and buildings.
- c. No surface occupancy shall be allowed on islands located within the flood control pool for Lake Sakakawea, regardless of their elevation.
- d. There are numerous archaeological (cultural and historical) sites on project lands. No surface occupancy will be allowed within a minimum of one-hundred (100) feet of any identified cultural resource site. However, case by case review shall be coordinated through the Riverdale Office Staff Archaeologist located at the Corps of Engineers Project Office in Riverdale, North Dakota, to determine adequate protection.
- e. All lease areas shall be cleared for Threatened and Endangered Species Usage. If any such usage has been documented in the immediate area, mineral exploration activities shall be conditioned in coordination with the Missouri River Recovery Program coordinator located at the Corps of Engineers Project Office in Riverdale, North Dakota.
- f. On those lands, which consist of highly erodible soils, any surface disturbances shall be kept to a minimum. The use of proper engineering practices shall be used to minimize potential soil erosion.
- g. Road construction in association with mineral exploration will be conducted in a manner as primitive as possible, and will be constructed using best engineering practices to minimize surface disturbance.
- h. All fill material required for the exploration or production phase shall be clear of all invasive or noxious weed seeds. Obtaining fill materials from project lands is prohibited.

i. Any current interior or boundary fence that is located within the lease area shall be maintained, or possibly replaced, to prevent livestock and/or general public from entering the site for their safety.

j. No surface occupancy will be allowed within twelve-hundred (1,200) feet of any leased or Corps managed recreation or zoned limited development area.

k. Exploration activities that extend beneath the flood control pool of Lake Sakakawea (1854 feet msl) will require Regulatory review in accordance with Section 10/404 authorities (Rivers and Harbors Act and Clean Waters Act respectively).

Required Stipulations in Mineral Leases on Army-Controlled Real Property

CORPS OF ENGINEERS STIPULATION

1. The Secretary of the Army or designee reserves the right to require cessation of operations if a national emergency arises or if the Army needs the leased property for a mission incompatible with lease operations. On approval from higher authority, the commander will give the lessee written notice or, if time permits, request BLM to give notice of the required suspension. The lessee agrees to this condition and waives compensation for its exercise.
2. If the commander or the commander's authorized representative discovers an imminent danger to safety or security which allows no time to consult BLM, that person may order such activities stopped immediately. The state BLM Director will be notified immediately, will review the order, and will determine the need for further remedial action.
3. If contamination is found in the operating area, the operator will immediately stop work and ask the commander or commander's representative for help.
4. Lessee liability for damage to improvements shall include improvements of the Department of Defense.
5. Before beginning to drill, the lessee must consult with third parties authorized to use real estate in the leased area and must consider programs for which third parties have contractual responsibility.
6. A license to conduct geophysical test on the leased area must be obtained separately from the installation commander or the District Commander.
7. Civil works only: conditions in BLM Form 3109-2, Stipulation for Lands Under Jurisdiction of Department of the Army Corps of Engineers, or successor form.

Appendix E.12

Bureau of Reclamation Oil and Gas Lease Stipulations

Oil and gas lease stipulations for Bureau of Reclamation properties and facilities are shown on the following:

Form 3109-1
(December 1972)
(formerly 3103-1)

United States
Department of the Interior
Bureau of Land Management

LEASE STIPULATIONS
BUREAU OF RECLAMATION

Serial Number _____

The lessee agrees to maintain, if required by the lessor during the period of this lease, including any extension thereof, an additional bond with qualified sureties in such sum as the lessor, if it considers that the bond required under Section 2(a) is insufficient, may at any time require:

- (a) to pay for damages sustained by any reclamation homestead entryman to his crops or improvements caused by drilling or other operations of the lessee, such damages to include the reimbursement of the entryman by the lessee, when he uses or occupies the land of any homestead entryman, for all construction and operation and maintenance charges becoming due during such use or occupation upon any portion of the land so used and occupied;
- (b) to pay any damage caused to any reclamation project or water supply thereof by the lessee's failure to comply fully with the requirements of this lease; and
- (c) to recompense any nonmineral applicant, entryman, purchaser under the Act of May 16, 1930 (46 Stat. 367), or patentee for all damages to crops or to tangible improvements caused by drilling or other prospecting operation, where any of the lands covered by this lease are embraced in any nonmineral application, entry, or patent under rights initiated prior to the date of this lease, with a reservation of the oil deposits, to the United States pursuant to the Act of July 17, 1914 (38 Stat. 509).

As to any lands covered by this lease within the area of any Government reclamation project, or in proximity thereto, the lessee shall take such precautions as required by the irrigation under such project or to the water supply thereof; *provided* that drilling is prohibited on any constructed works or right-of-way of the Bureau of Reclamation, and *provided*, further, that there is reserved to the lessor, its successors and assigns, the superior and prior right at all times to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, and reclamation works, in which construction, operation, and maintenance, the lessor, its successors and assigns, shall have the right to use any or all of the lands herein described without making compensation therefor, and shall not be responsible for any damage from the presence of water thereon or on account of ordinary, extraordinary, unexpected, or unprecedented floods. That nothing shall be done under this lease to increase the cost of, or interfere in any manner with, the construction, operation, and maintenance of such works. It is agreed by the lessee that, if the construction of any or all of said dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone or telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures or reclamation works across, over, or upon said lands should be made more expensive by reason of the existence of the improvements and workings of the lessee thereon, said additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the

United States, or its successors, constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, appurtenant irrigation structures, or reclamation works, across, over, or upon said lands; *provided, however*, that subject to advance written approval by the United States, the location and course of any improvements or works and appurtenances may be changed by the lessee; *provided*, further, that the reservations, agreements, and conditions contained in the within lease shall be and remain applicable notwithstanding any change in the location or course of said improvements or works of lessee. The lessee further agrees that the United States, its officers, agents, and employees, and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works hereinabove enumerated. Nothing in this paragraph shall be construed as in any manner limiting other reservations in favor of the United States contained in this lease.

THE LESSEE FURTHER AGREES That there is reserved to the lessor, its successors and assigns, the prior right to use any of the lands herein leased, to construct, operate, and maintain dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures, and also the right to remove construction materials therefrom, without any payment made by the lessor or its successors for such right, with the agreement on the part of the lessee that if the construction of any or all of such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or the removal of construction materials therefrom, should be made more expensive by reason of the existence of improvements or workings of the lessee thereon, such additional expense is to be estimated by the Secretary of the Interior, whose estimate is to be final and binding upon the parties hereto, and that within thirty (30) days after demand is made upon the lessee for payment of any such sums, the lessee will make payment thereof to the United States or its successors constructing such dams, dikes, reservoirs, canals, wasteways, laterals, ditches, telephone and telegraph lines, electric transmission lines, roadways, or appurtenant irrigation structures across, over, or upon said lands or removing construction materials therefrom. The lessee further agrees that the lessor, its officers, agents, and employees and its successors and assigns shall not be held liable for any damage to the improvements or workings of the lessee resulting from the construction, operation, and maintenance of any of the works herein above enumerated. Nothing contained in this paragraph shall be construed as in any manner limiting other reservations in favor of the lessor contained in this lease.

To insure against the contamination of the waters of the _____ Reservoir,
 _____ Project, State of _____, the lessee agrees that
 the following further conditions shall apply to all drilling and operations on lands covered by this lease,
 which lie within the flowage or drainage area of the _____ Reservoir, as such area
 is defined by the Bureau of Reclamation:

1. The drilling sites for any and all wells shall be approved by the Superintendent,
 Bureau of Reclamation, _____ Project, _____ before
 drilling begins. Sites for the construction of pipe-line rights-of-way or other authorized facilities shall also
 be approved by the Superintendent before construction begins.

2. All drilling or operation methods or equipment shall, before their employment,
 be inspected and approved by the Superintendent of the _____ Project,
 _____, and by the supervisor of the U.S. Geological Survey having jurisdiction over the area.

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SPECIAL STIPULATION - BUREAU OF RECLAMATION

To avoid interference with recreation development and/or impacts to fish and wildlife habitat and to assist in preventing damage to any Bureau of Reclamation dams, reservoirs, canals, ditches, laterals, tunnels, and related facilities, and contamination of the water supply therein, the lessee agrees that the following conditions shall apply to all exploration and developmental activities and other operation of the works thereafter on lands covered by this lease:

1. Prior to commencement of any surface-disturbing work including drilling, access road work, and well location construction, a surface use and operations plan will be filed with the appropriate officials. A copy of this plan will be furnished to the Regional Director, Great Plains Region, Bureau of Reclamation, P.O. Box 36900, Billings, MT 59107-6900, for review and consent prior to approval of the plan. Such approval will be conditioned on reasonable requirements needed to prevent soil erosion, water pollution, and unnecessary damages to the surface vegetation and other resources, including cultural resources, of the United States, its lessees, permittees, or licensees, and to provide for the restoration of the land surface and vegetation. The plan shall contain provisions as the Bureau of Reclamation may deem necessary to maintain proper management of the water, recreation, lands structures, and resources, including cultural resources, within the prospecting, drilling, or construction area.

Drilling sites for all wells and associated investigations such as seismograph work shall be included in the above-mentioned surface use and operation plan.

If later explorations require departure from or additions to the approved plan, these revisions or amendments, together with a justification statement for proposed revisions, will be submitted for approval to the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.

Any operations conducted in advance of approval of an original, revised, or amended prospecting plan, or which are not in accordance with an approved plan constitute a violation of the terms of this lease. The Bureau of Reclamation reserves the right to close down operations until such corrective action, as is deemed necessary, is taken by the lessee.

2. No occupancy of the surface of the following excluded areas is authorized by this lease. It is understood and agreed that the use of these areas for Bureau of Reclamation purposes is superior to any other use. The following

restrictions apply only to mineral tracts located within the boundary of a Bureau of Reclamation project, where the United States owns 100 percent of the fee mineral interest in said tract, or tracts.

- a. Within 500 feet on either side of the centerline of any and all roads or highways within the leased area.
 - b. Within 200 feet on either side of the centerline of any and all trails within the leased area.
 - c. Within 500 feet of the normal high-water line of any and all live streams in the leased area.
 - d. Within 400 feet of any and all recreation developments within the leased area.
 - e. Within 400 feet of any improvements either owned, permitted, leased, or otherwise authorized by the Bureau of Reclamation within the leased area.
 - f. Within 200 feet of established crop fields, food plots, and tree/shrub plantings within the leased area.
 - g. Within 200 feet of slopes steeper than a 2:1 gradient within the leased area.
 - h. Within established rights-of-way of canals, laterals, and drainage ditches within the leased area.
 - i. Within a minimum of 500 feet horizontal from the centerline of the facility or 50 feet from the outside toe of the canal, lateral, or drain embankment, whichever distance is greater, for irrigation facilities without clearly marked rights-of-way within the leased area.
3. No occupancy of the surface or surface drilling will be allowed in the following areas. In addition, no directional drilling will be allowed that would intersect the subsurface zones delineated by a vertical plane in these areas. The following restrictions apply only to mineral tracts, located within the boundary of a Bureau of Reclamation project, where the United States owns 100 percent of the fee mineral interest in said tract, or tracts.
- a. Within 1,000 feet of the maximum water surface, as defined in the Standard Operating Procedures (SOP), of any reservoirs and related facilities located within the leased area.
 - b. Within 2,000 feet of dam embankments and appurtenance structures such as spillway structures, outlet works, etc.
 - c. Within one-half (1/2) mile horizontal from the centerline of any tunnel within the leased area.
4. The distances stated in items 2 and 3 above are intended to be general indicators only. The Bureau of Reclamation reserves the right to revise the distances as needed to protect Bureau of Reclamation facilities.
5. The use of explosives in any manner shall be so controlled that the works and facilities of the United States, its successors and assigns, will in no way be endangered or damaged. In this connection, an explosives use plan shall be submitted to and approved by the Regional Director, Great Plains Region, Bureau of Reclamation, or his/her authorized representative.
6. The lessee shall be liable for all damage to the property of the United States, its successors or assigns, resulting from the exploration, development, or operation of the works contemplated by this lease, and shall further hold the United States, its successors or assigns, and its officers, agents, and employees, harmless from all claims of third parties for injury or damage sustained or in any way resulting from the exercise of the rights and privileges conferred by the lease.
7. The lessee shall be liable for all damages to crops or improvements of any entryman, nonmineral applicant, or patentee, their successors or assigns, caused by or resulting from the drilling or other operations of the lessee, including reimbursement of any entryman or patentee, their successors or assigns, for all construction, operation, and maintenance charges becoming due on any portion of their said lands damaged as a result of the drilling or other operation of the lessee.
8. In addition to any other bond required under the provisions of this lease, the lessee shall provide such bond as the United States may at any time require for damages which may arise under the liability provisions of Section six (6) and seven (7) above.

Appendix E.13

Required Design Features in Sage-Grouse habitat

Required Design Features (RDFs) are required for certain activities in all GRSG habitat. RDFs establish the minimum specifications for certain activities to help mitigate adverse impacts. However, the applicability and overall effectiveness of each RDF cannot be fully assessed until the project level when the project location and design are known. Because of site-specific circumstances, some RDFs may not apply to some projects (e.g., a resource is not present on a given site) and/or may require slight variations (e.g., a larger or smaller protective area). Specific details about RDFs can be found in Appendix V-1.

All variations in RDFs would require that at least one of the following be demonstrated in the NEPA analysis associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g. due to site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable;
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat;
- A specific RDF will provide no additional protection to GRSG or its habitat.